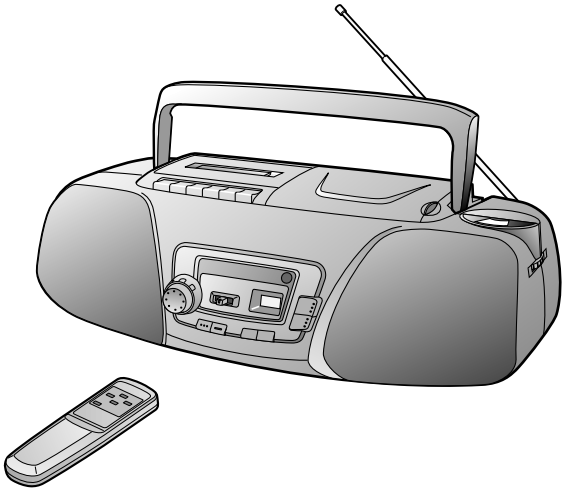
SHARP SERVICE MANUAL

No. S5831QTCD121/



QT-CD121

COMPACT disc DIGITAL AUDIO

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

	Page
IMPORTANT SERVICE NOTES	2
SPECIFICATIONS	2
NAMES OF PARTS	3
REMOTE CONTROL	3
DISASSEMBLY	4
REMOVING AND REINSTALLING THE MAIN PARTS	5
ADJUSTMENT	6
BLOCK DIAGRAM	8
SCHEMATIC DIAGRAM / WIRING SIDE OF P.W.BOARD	10
NOTES ON SCHEMATIC DIAGRAM	16
TYPES OF TRANSISTOR	16
WAVEFORMS OF CD CIRCUIT	17
TROUBLESHOOTING	18
FUNCTION TABLE OF IC	21
PARTS GUIDE/EXPLODED VIEW	
PACKING OF THE SET	

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

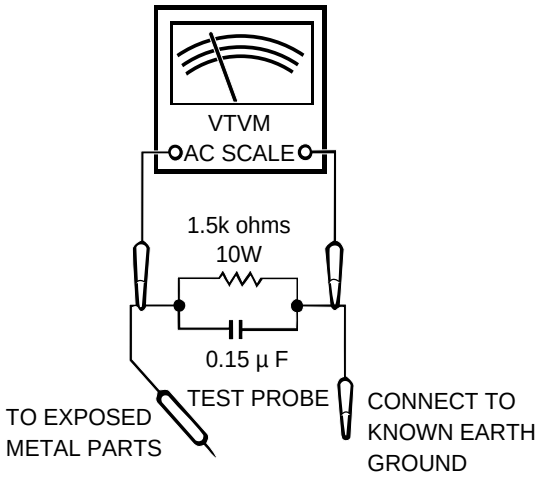
FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

IMPORTANT SERVICE NOTES

BEFORE RETURNING THE AUDIO PRODUCT
(Fire & Shock Hazard)
Before returning the audio product to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the audio product.
2. Inspect all protective devices such as insulating materials, cabinet, terminal board, adjustment and compartment covers or shields, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

* Plug the AC line cord directly into a 120 volt AC outlet.
* Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as conduit or electrical ground connected to earth ground.
* Use a VTVM or VOM with 1000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor (See diagram).
* Connect the resistor connection to all exposed metal parts having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.



All check must be repeated with the AC line cord plug connection reversed.
Any reading of 0.3 volt RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the audio product to the owner.

SPECIFICATIONS

● General

Power source:	AC 120V, 60 Hz DC 12 V ["D" size (UM/SUM-1, R20 or HP-2) battery x 8]
Power consumption:	20 W
Output power:	FTC; 2.0 W min. RMS per channel into 8 ohms from 150 Hz to 20 kHz, with no more than 10 % total harmonic distortion. RMS; 2.3 W/CH (DC operation, 10 % T.H.D.)
Speakers:	4" (10 cm) wooferr x 2 Tweeter x 2
Output terminal:	Headphones; 16-50 ohms (recommended 32 ohms)
Dimensions:	Width; 18-15/16" (480 mm) Height; 6-1/16" (153 mm) Depth; 10" (254 mm)
Weight:	7.1 lbs. (3.2 kg) without batteries

● Radio

Frequency range:	FM; 87.6 - 108 MHz AM; 530 - 1,702 kHz

● Tape recorder

Frequency response:	50 - 14,000 Hz (Normal tape)
Signal/noise ratio:	50 dB
Wow and flitter:	0.25 % (WRMS)
Motor:	DC 12 V electric governor
Bias system:	AC bias
Erase system:	Magnet erase

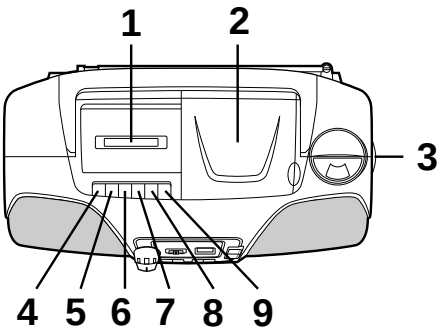
● Compact disc player

Disc:	Compact disc
Signal readout:	Non-contact, 3-beam semiconductor laser pickup
Audio channels:	2
Quantization:	16-bit linear quantization
Filter:	4-tims oversampling digital filter
D/A converter:	1-bit D/A converter
Wow and flutter:	Unmeasurable (less than 0.001% W. peak)

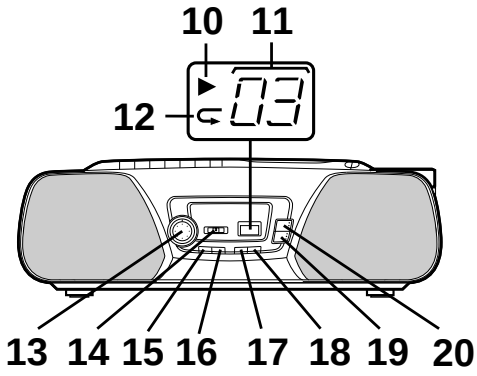
Specifications for this model are subject to change without prior notice.

NAMES OF PARTS

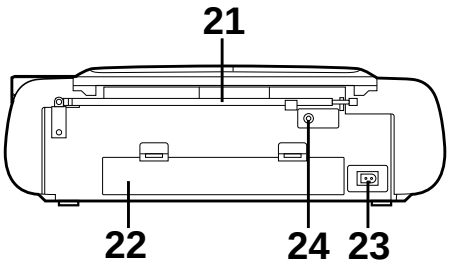
1. Cassette Compartment
2. CD Compartment
3. Tuning Control
4. (TAPE) Record Button: ●
5. (TAPE) Play Button: ▶
6. (TAPE) Rewind Button: ◀◀
7. (TAPE) Fast Forward Button: ▶▶
8. (TAPE) Stop/Eject Button: ■ /▲
9. (TAPE) Pause Button: ▮▮



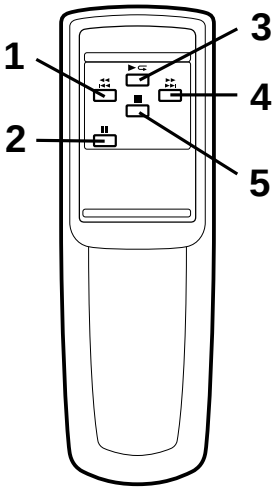
10. (CD) Play Indicator: ▶
11. (CD) Track Number Indicator
12. (CD) Repeat Indicator: ⟲
13. Volume Control
14. Function Selector/Power Switch
15. Extra Bass Button: X-BASS
16. Surround Button
17. (CD) Track Down/Review Button: ◀◀/|◀◀
18. (CD) Track Up/Cue Button: ▶▶/▶▶|
19. (CD) Stop Button: ■
20. (CD) Play/Repeat Button: ▶⟲



21. FM Telescopic Rod Aerial
22. Battery Compartment
23. AC Power Input Socket
24. Headphones Socket



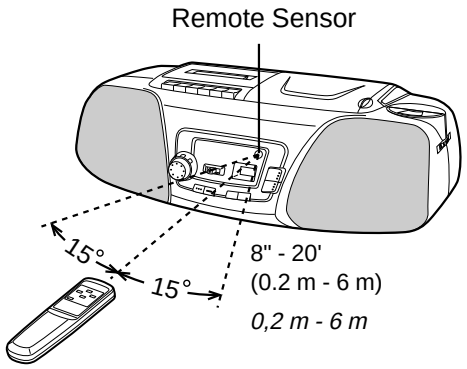
1. (CD) Track Down/Review Button: ◀◀/|◀◀
2. (CD) Pause Button: ▮▮
3. (CD) Play/Repeat Button: ▶⟲
4. (CD) Track Up/Cue Button: ▶▶/▶▶|
5. (CD) Stop Button: ■



REMOTE CONTROL

Notes concerning use:

- Replace the batteries if control distance decreases or operation becomes erratic.
- Periodically clean the transmitter LED on the remote control and the sensor on the main unit with a soft cloth.
- Exposing the sensor on the main unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
- Keep the remote control away from moisture, excessive heat, shock, and vibrations.



DISASSEMBLY

Caution on Disassembly
Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:
1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take suffcient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Rear Cabinet	1. Screw ..... (A1) x10 2. Socket ..... (A2) x1	4-1 4-2
2	Top Cabinet (with CD Mechanism/ Tape Mechanism/ Main PWB)	1. Knob ..... (B1) x1 2. Screw ..... (B2) x3 3. Socket ..... (B3) x1	4-2
3	Main PWB/ Switch PWB/ Headphones PWB	1. Screw ..... (C1) x8 2. Socket ..... (C2) x4	4-3 4-3,4-4
4	Tape Mechanism	1. Screw ..... (D1) x4	4-4
5	CD Mechanism	1. Screw ..... (E1) x3	4-4
6	Terminal PWB	1. Screw ..... (F1) x5 2. Hook ..... (F2) x1	4-5

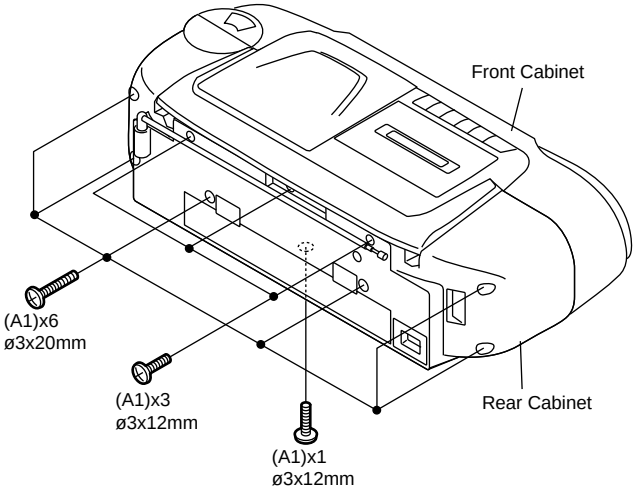


Figure 4-1

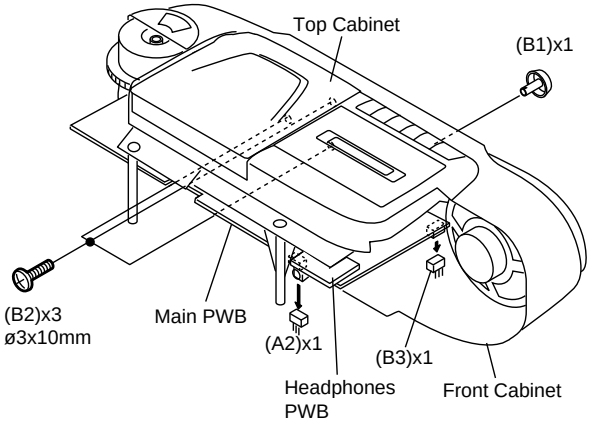


Figure 4-2

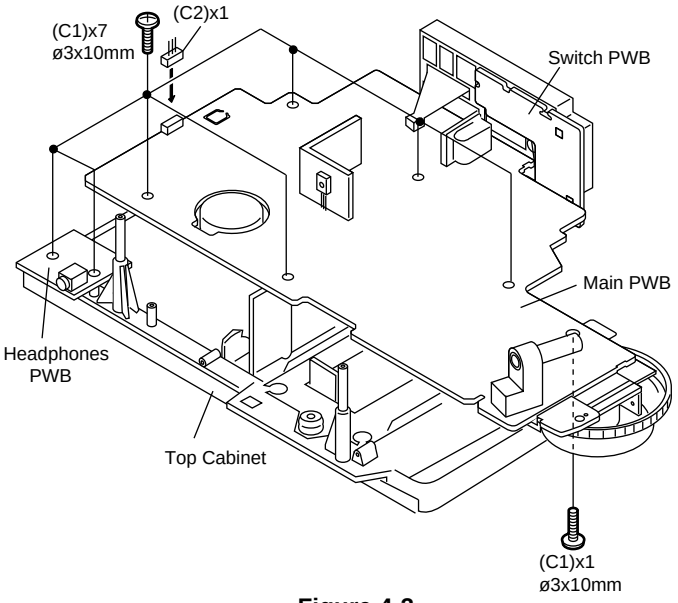


Figure 4-3

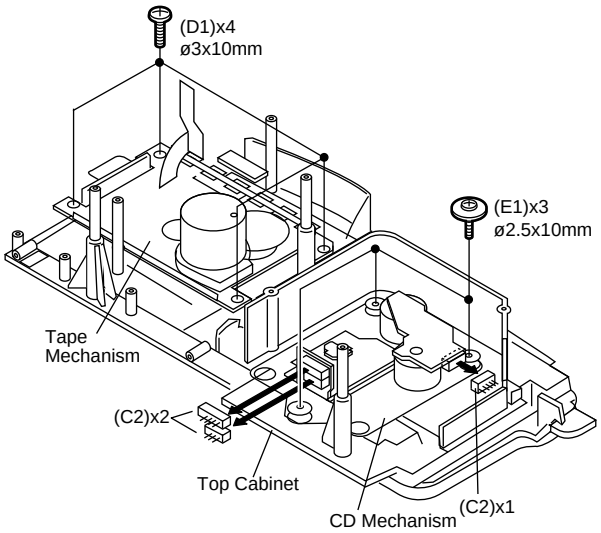


Figure 4-4

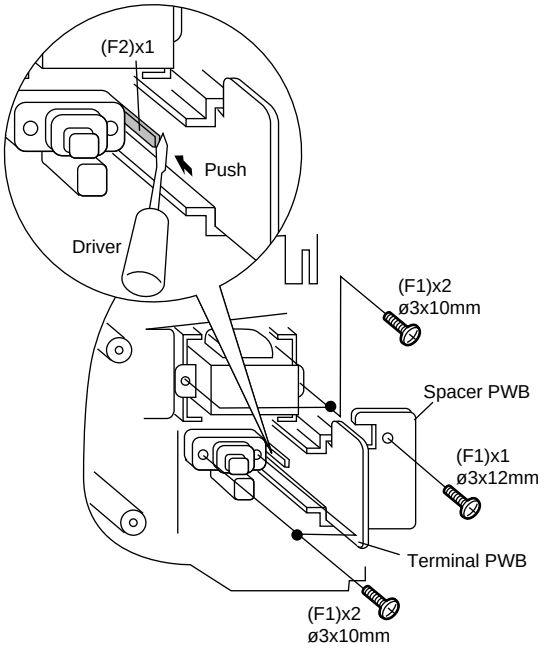


Figure 4-5

REMOVING AND REINSTALLING THE MAIN PARTS

CD MECHANISM SECTION

Perform steps 1, 2, 3 and 5 of the disassembly method to remove the CD mechanism.

How to remove the pickup (See Fig. 5.)

1. Remove the screws (A1) x 2 pcs., to remove the shaft (A2) x1 pc.
2. Remove the stop washer (A3) x1 pc., to remove the gear (A4) x 1 pc.
3. Remove the pickup.

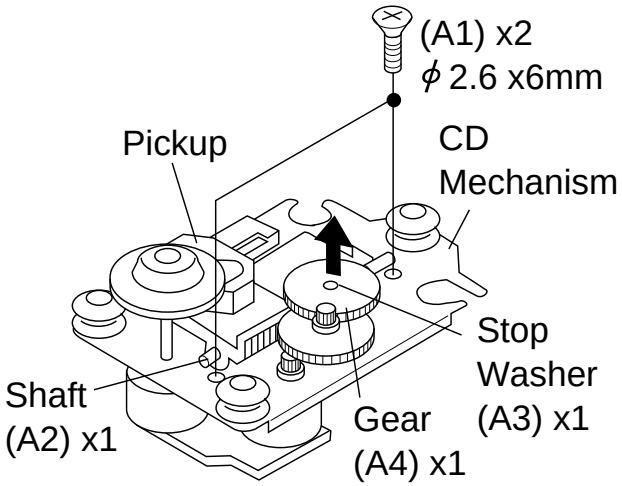


Figure 5

ADJUSTMENT

MECHANISM SECTION

• Driving Force Check

Torque Meter	Specified Value
PLAY: TW-2412	Over 120 g

• Torque Check

Torque Meter	Specified Value
Play: TW-2111	25 to 65 g.cm
Fast Forward: TW-2231	60 to 130 g.cm
Rewind: TW-2231	60 to 130 g.cm

• Head Azimuth

Torque Meter	Specified Value
MTT-114	Output: Speaker Terminal (CNP201 Load resistance: 8 ohms)

• Tape Speed

Test Tape	Adjusting Point	Specified Value	Instrument Connection
MTT-111	In motor	3,000 ± 90 Hz	Output: Speaker Teaminal (CNP201 Load resistance: 8 ohms)

TAPE SECTION

Position of each switch or control	
Volume control	Max
Function switch	Tape/Power Off
X-BASS	On

• Bias Oscillation

Adjustment Point	Specified Value	Instrument Connection
L301	82 kHz ± 6 kHz	Pin 2 of CNP201

• Playback Amplifier Sensitivity Check

Test Tape	Specified Value	Instrument Connection
MTT-118	1.8 V ± 3 dB	Speaker Terminal (Load resistance: 8 ohms)

TUNER SECTION

fL: Low-range frequency
fH: High-range frequency

• FM IF/RF

Test Stage	Specified Value/Adjusting Point	Instrument Connection
IF	T1	Input: Pin 1 of IC1 Output: Pin 17 of IC2
Detection	T2	
Band Coverage	fL: L2 fH: TC2	Iuput: Antenna Output: Speaker Terminal (CNP201 Load resistance: 8 ohms)
Tracking	88.0 MHz: L1 108.0 MHz: TC1	

• AM IF/RF

Test Stage	Specified Value/Adjusting Point	Instrument Connection
IF	T3	Input: Antenna Output: Pin 19 of IC2
Band Coverage	fL: L4 fH: TC4	Input: Antenna Output: Speaker Terminal (CNP201 Load resistance: 8 ohms)
Tracking	600 kHz: L3 1,400 kHz: TC3	

• VCO Frequency

Adjusting Point	Specified Value	Instrument Connection
VR1	76 kHz ± 200 Hz	Pin 13, pin 21 and ground of IC2

Note:
After preparing the test circuit shown in Fig. 6-1, connect the Pin 13, Pin 21 and ground of the IC2 with the test circuit, and measure the value. At this time, apply a standard unmodulated signal input and adjust the VCO.

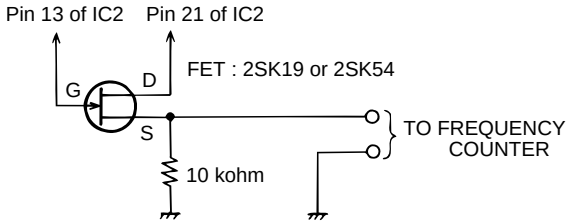


Figure 6-1 VCO FREQUENCY TEST CIRCUIT

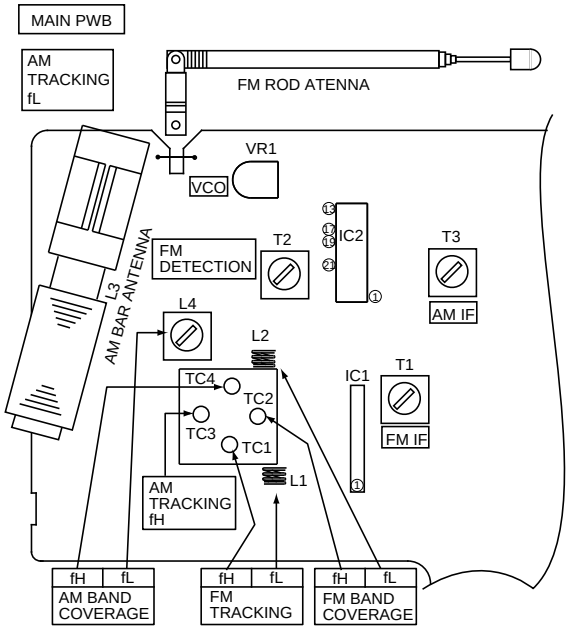


Figure 6-2 ADJUSTMENT POINTS

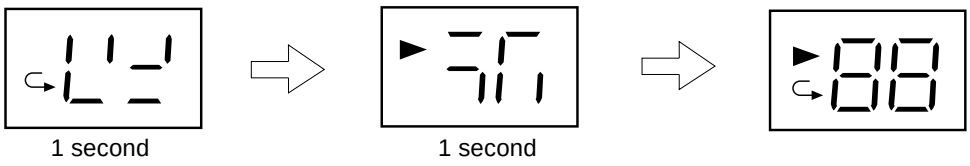
CD SECTION

Since this CD system incorporates the following automatic adjustment function, when the pickup is replaced, it is necessary to reajust it.
Since this CD unit does not need adjustment, the combination of PWB and laser pickup unit is not restricted.

TEST MODE

Start	While holding down the "STOP" button, move the FUNCTION/POWER switch to "CD". Then, release the "STOP" button and, within 0.5 second, connect the TEST POINT to GND (within 0.5 second). (See Fig. 7)	
Note	1. When the CD LID switch is in the OFF position, the unit will be able to enter the test mode. However, playback cannot be performed in this mode. 2. You can only move the pickup. 3. The LCD display should be the same as it is for normal CD operations.	
Operation	1	The use of the "UP/CUE" button will move the pickup to the outermost position. The use of the "DOWN/REVIEW" button will move the pickup to the innermost position.
	2	When the "PLAY" button is pressed, the laser will be lit, and when the "STOP" button is pressed, it will be turned off. Playback will also start and stop when these buttons are pressed.
		a. If the "PLAY" button is pressed while in the stop mode, the laser will simply be turned on at first. b. If the laser is lit and the "PLAY" button is pressed again, playback will start from the current pickup position. c. If the "STOP" button is pressed, playback will stop. When pressed again, the laser will be turned off.
	3	Turning the tracking servo on or off.
		a. Each time the PAUSE button is pressed during playback, the tracking servo will be turned on or off. (Note: If the PLAY button is pressed while in the stop mode, the tracking servo will automatically be turned on.)

LCD MODE

Start	While holding down the "STOP" button, move the FUNCTION/POWER switch to "CD". Then, release the "STOP" button and, within 0.5 second, press the REVIEW/DOWN button.
Display	① ② ③  1 second 1 second * After the number ③ has appeared in the display, each time the "UP/CUE" button is pressed, the display will switch in the following order: ①, ②, and then ③.

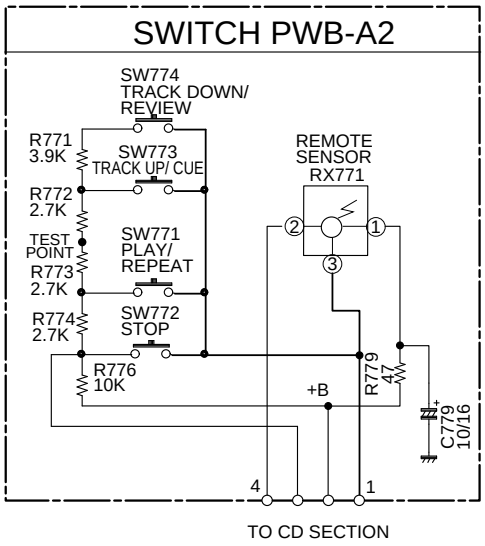


Figure 7

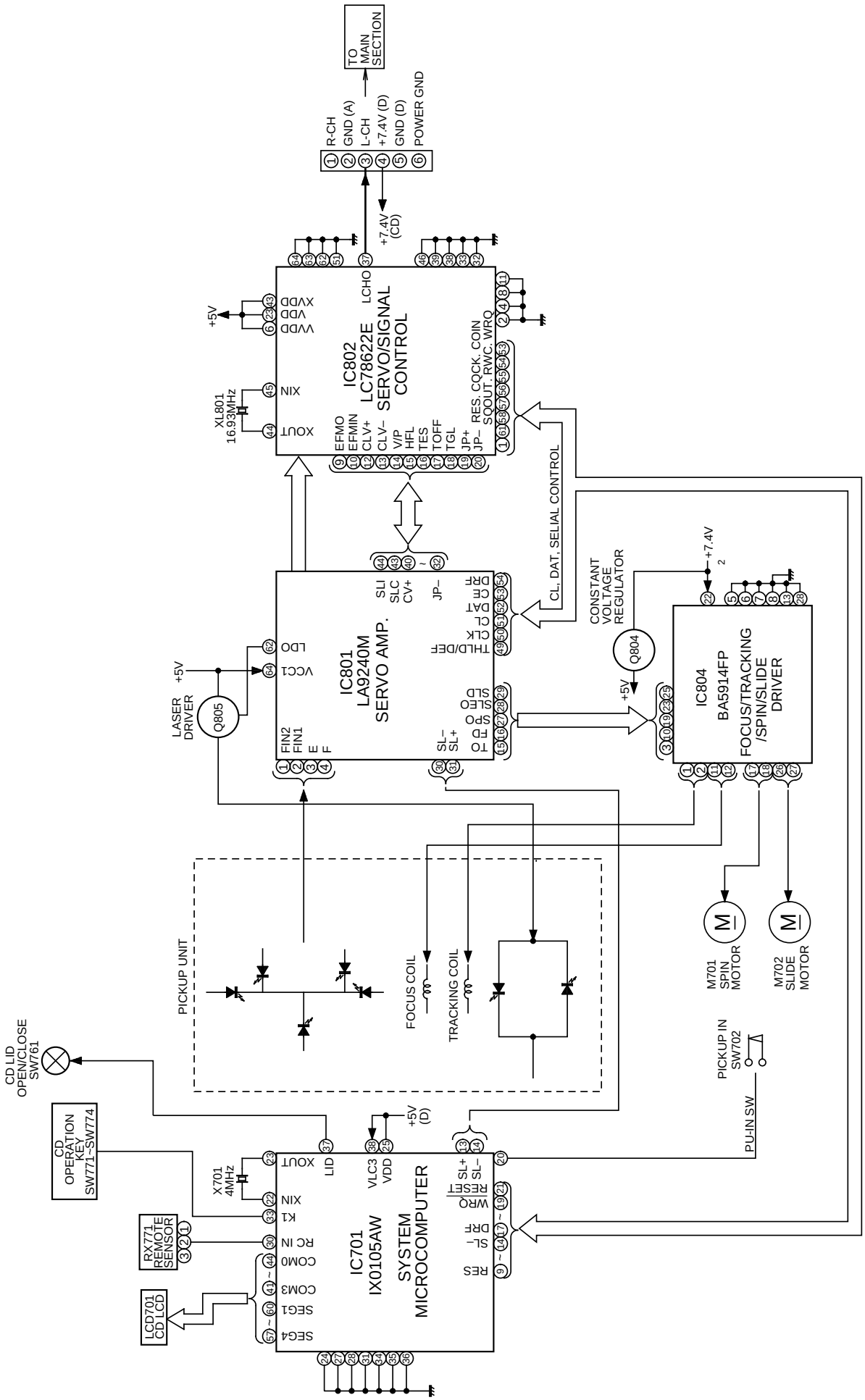


Figure 8 BLOCK DIAGRAM (1/2)

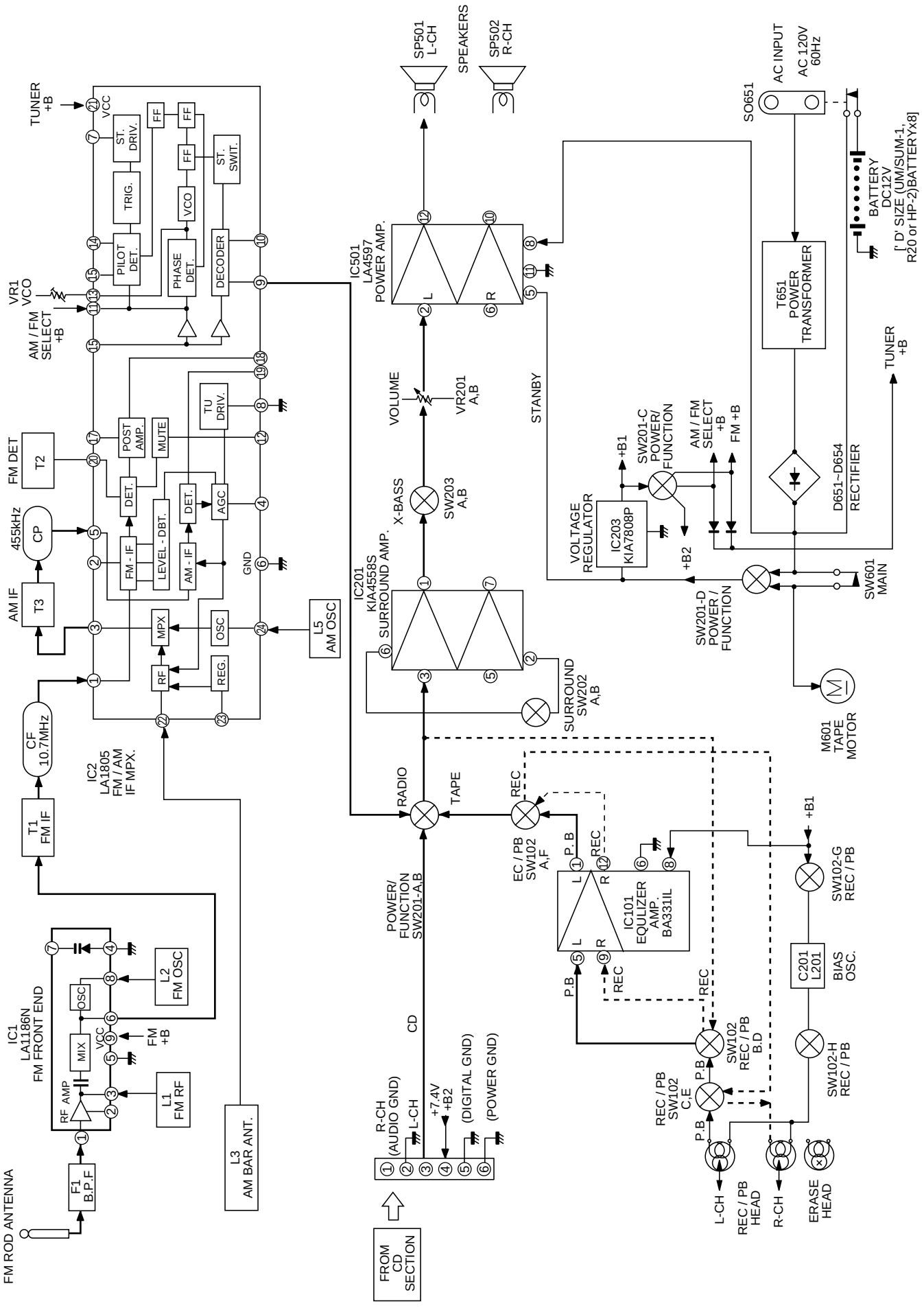
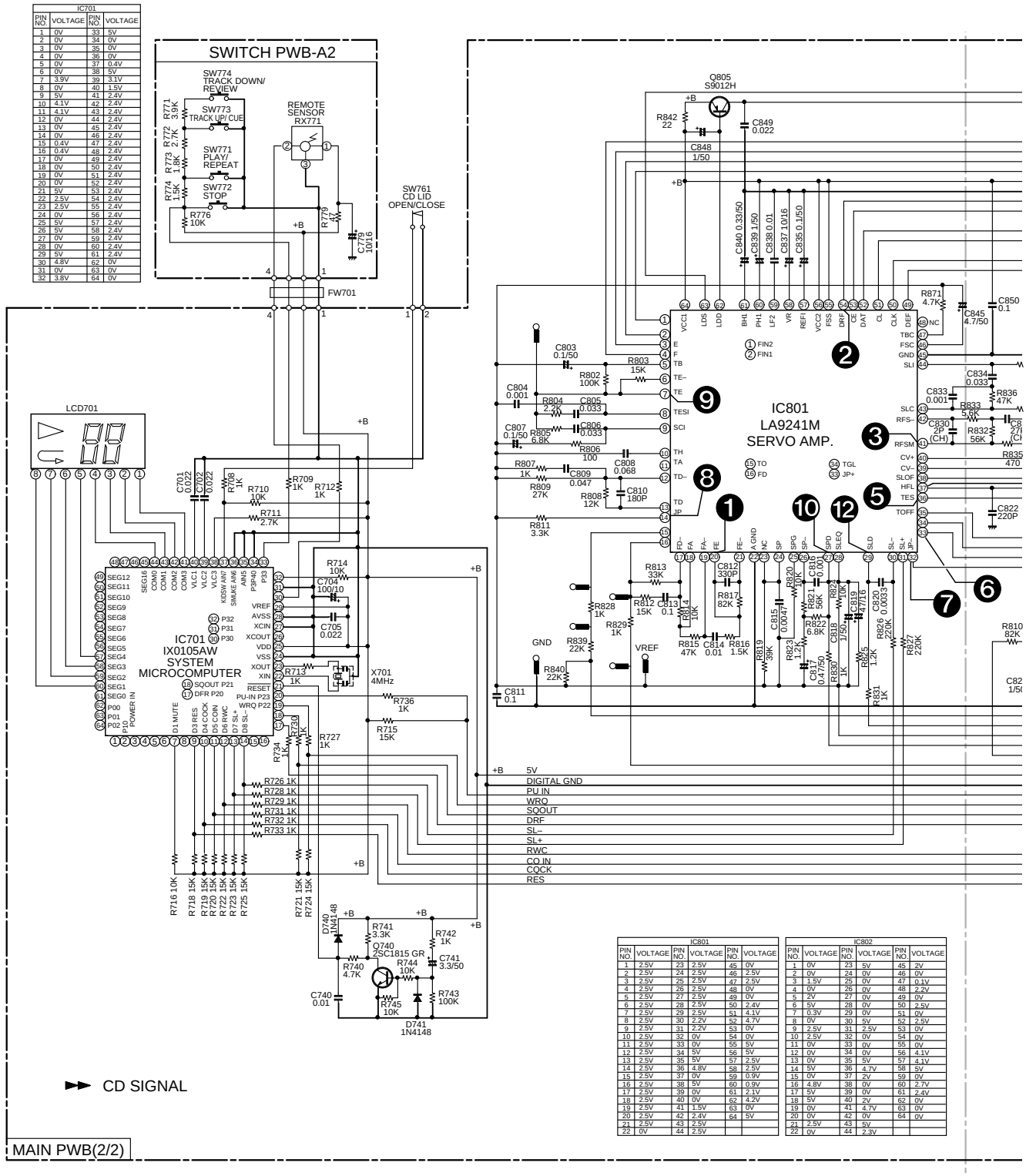


Figure 9 BLOCK DIAGRAM (2/2)



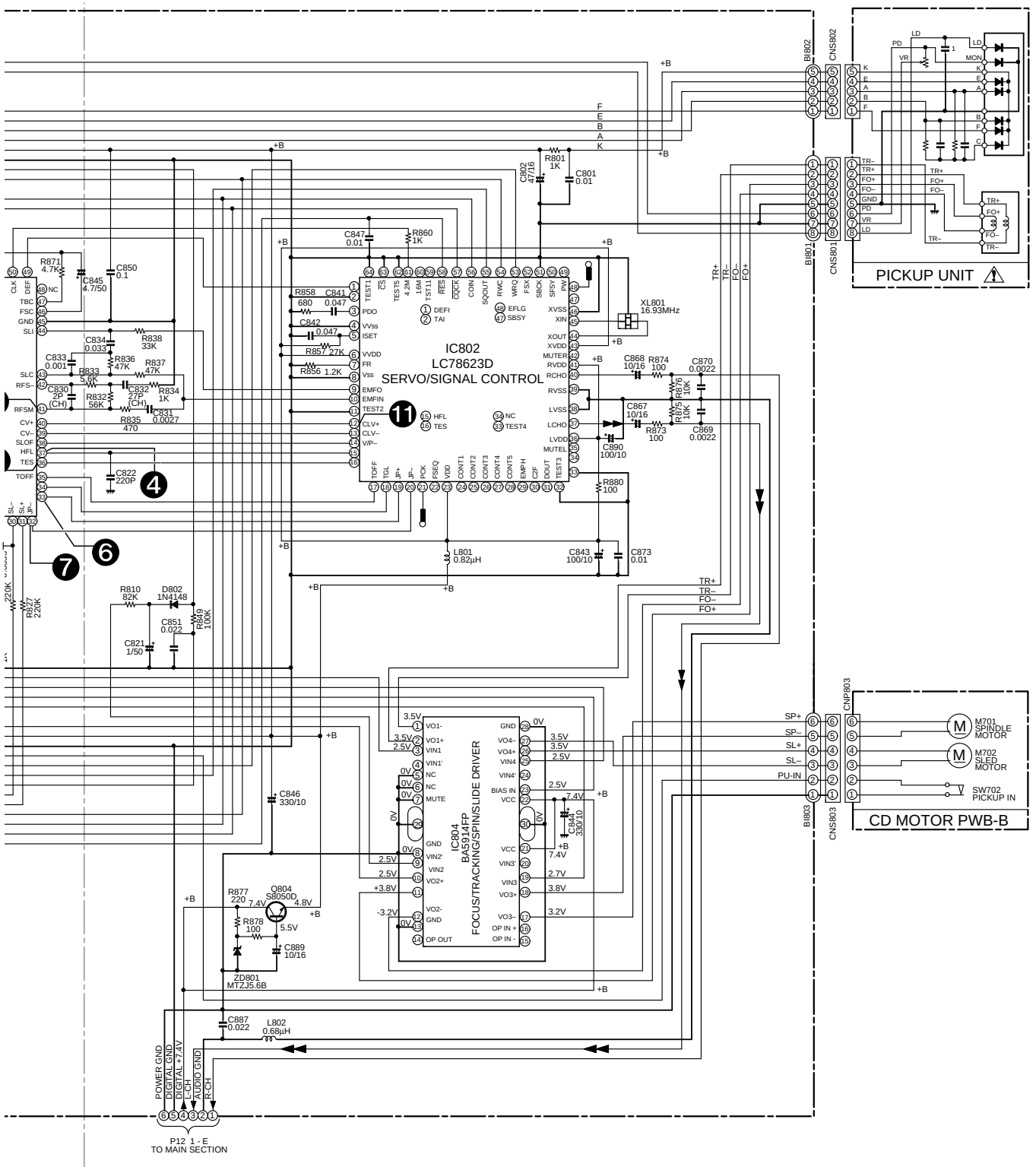
IC701			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0V	33	5V
2	0V	34	0V
3	0V	35	0V
4	0V	36	0V
5	0V	37	0.4V
6	0V	38	5V
7	3.9V	39	3.1V
8	0V	40	1.5V
9	5V	41	2.4V
10	4.1V	42	2.4V
11	4.1V	43	2.4V
12	0V	44	2.4V
13	0V	45	2.4V
14	0V	46	2.4V
15	0.4V	47	2.4V
16	0.4V	48	2.4V
17	0V	49	2.4V
18	0V	50	2.4V
19	0V	51	2.4V
20	0V	52	2.4V
21	5V	53	2.4V
22	2.5V	54	2.4V
23	2.5V	55	2.4V
24	0V	56	2.4V
25	5V	57	2.4V
26	5V	58	2.4V
27	0V	59	2.4V
28	0V	60	2.4V
29	5V	61	2.4V
30	4.8V	62	0V
31	0V	63	0V
32	3.8V	64	0V

IC801					
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.5V	23	2.5V	45	0V
2	2.5V	24	2.5V	46	2.5V
3	2.5V	25	2.5V	47	2.5V
4	2.5V	26	2.5V	48	0V
5	2.5V	27	2.5V	49	0V
6	2.5V	28	2.5V	50	2.4V
7	2.5V	29	2.5V	51	4.1V
8	2.5V	30	2.2V	52	4.7V
9	2.5V	31	2.2V	53	0V
10	2.5V	32	0V	54	0V
11	2.5V	33	0V	55	5V
12	2.5V	34	5V	56	5V
13	2.5V	35	5V	57	2.5V
14	2.5V	36	4.8V	58	2.5V
15	2.5V	37	0V	59	0.9V
16	2.5V	38	5V	60	0.9V
17	2.5V	39	0V	61	2.1V
18	2.5V	40	0V	62	4.2V
19	2.5V	41	1.5V	63	0V
20	2.5V	42	2.4V	64	5V
21	2.5V	43	2.5V		
22	0V	44	2.5V		

IC802					
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0V	23	5V	45	2V
2	0V	24	0V	46	0V
3	1.5V	25	0V	47	0.1V
4	0V	26	0V	48	2.2V
5	2V	27	0V	49	0V
6	5V	28	0V	50	1.5V
7	0.3V	29	0V	51	0V
8	0V	30	5V	52	2.5V
9	2.5V	31	2.5V	53	0V
10	2.5V	32	0V	54	0V
11	0V	33	0V	55	0V
12	0V	34	0V	56	4.1V
13	0V	35	5V	57	4.1V
14	5V	36	4.7V	58	5V
15	0V	37	2V	59	0V
16	4.8V	38	0V	60	2.7V
17	5V	39	0V	61	2.4V
18	5V	40	2V	62	0V
19	0V	41	4.7V	63	0V
20	0V	42	0V	64	0V
21	2.5V	43	5V		
22	0V	44	2.3V		

• The numbers ❶ to ⓬ are waveform numbers shown in page 17.

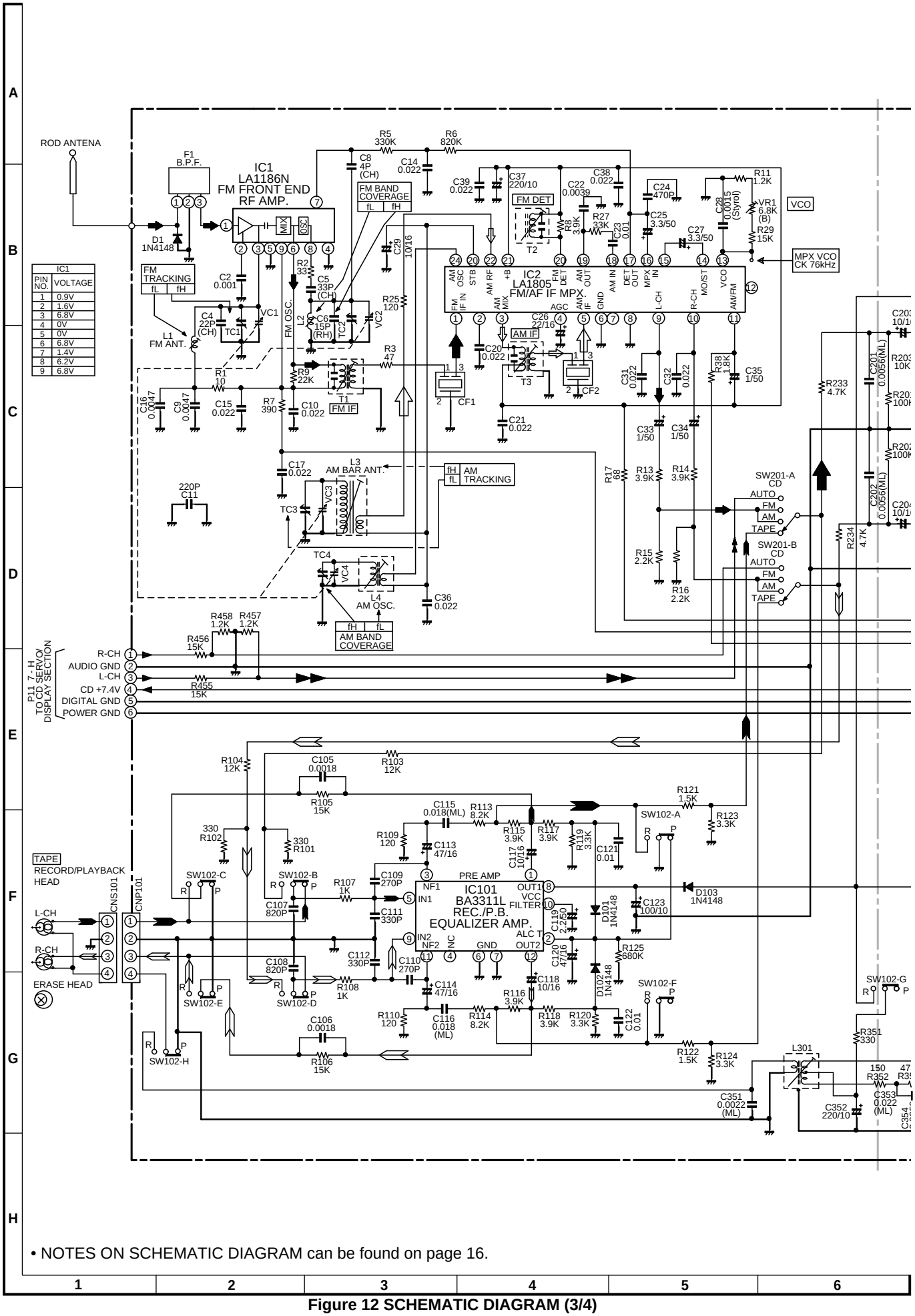
Figure 10 SCHEMATIC DIAGRAM (1/4)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

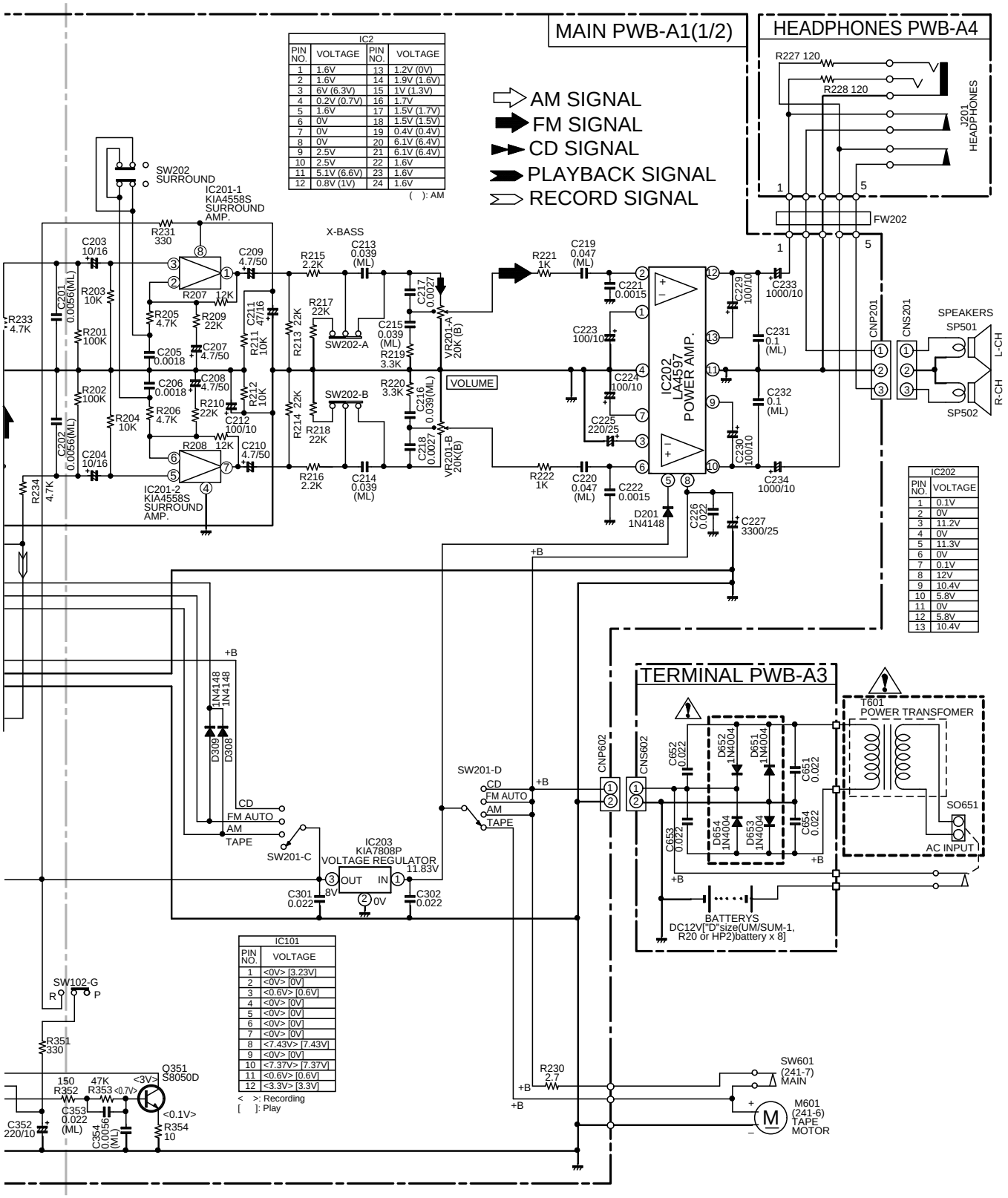
7	8	9	10	11	12

Figure 11 SCHEMATIC DIAGRAM (2/4)



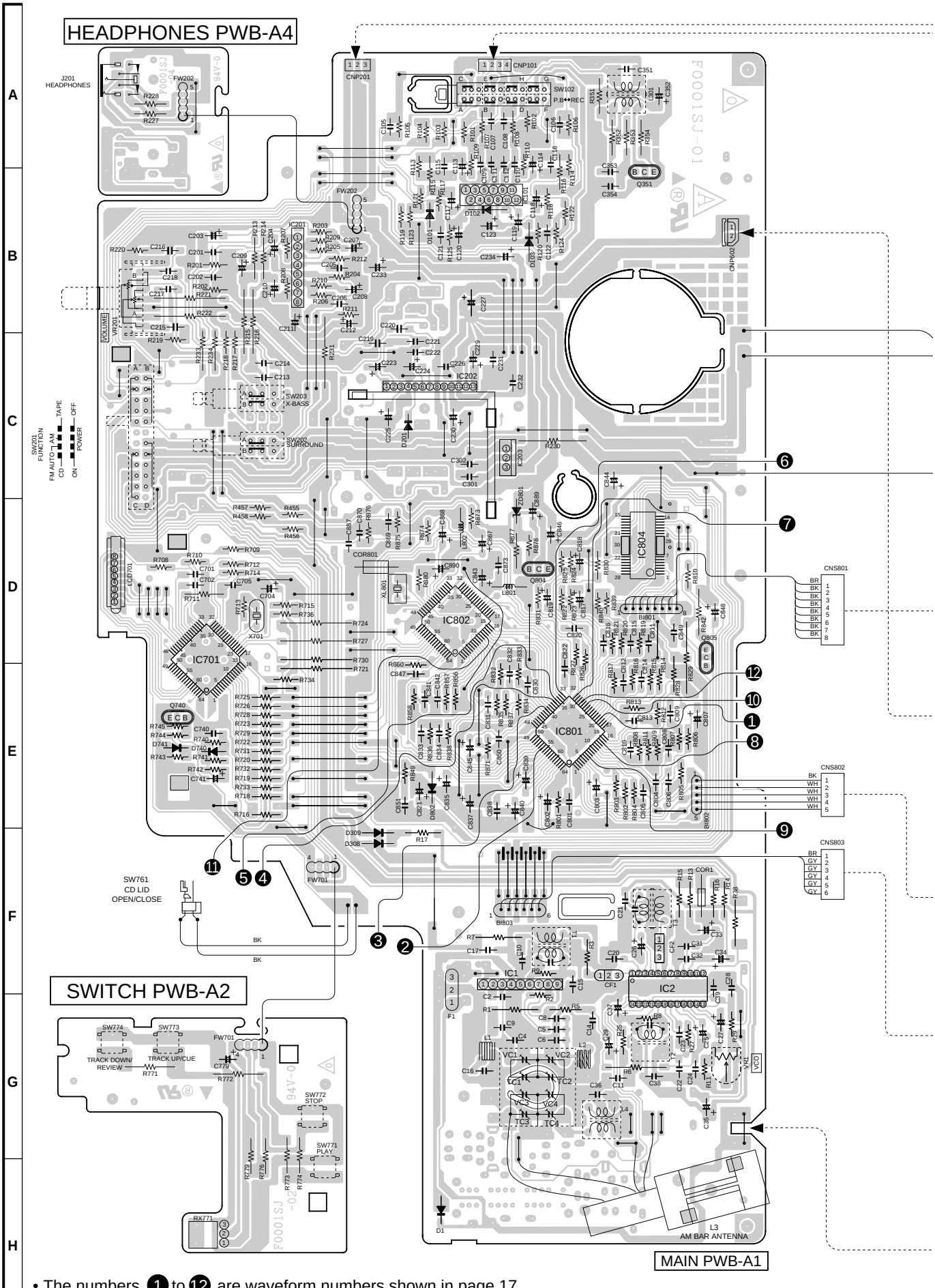
• NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

Figure 12 SCHEMATIC DIAGRAM (3/4)



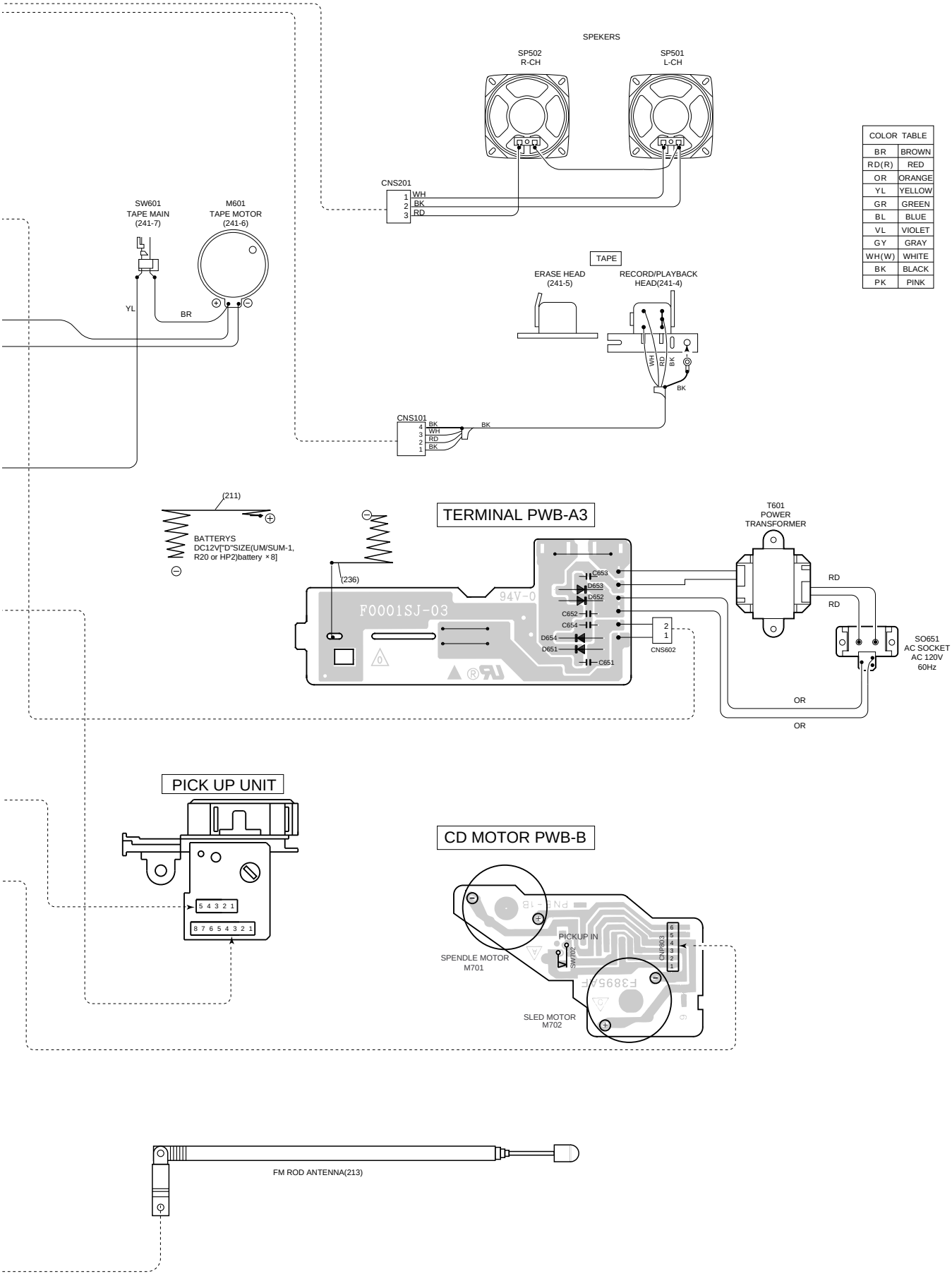
7	8	9	10	11	12

Figure 13 SCHEMATIC DIAGRAM (4/4)



• The numbers ❶ to ⓬ are waveform numbers shown in page 17.

Figure 14 WIRING OF P.W.BOARD (1/2)



COLOR TABLE	
BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

7	8	9	10	11	12

Figure 15 WIRING OF P.W.BOARD (2/2)

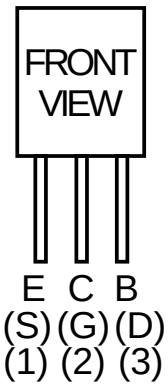
NOTES ON SCHEMATIC DIAGRAM

• Resistor:
To differentiate the units of resistors, the symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is an ohm resistor. The resistor designated "Fusible" is a fuse type resistor
• Capacitor:
To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression “capacitance/withstand voltage” is used.
(CH), (TH), (RH), (UJ): Temperature compensation
(ML): Mylar type
(P.P.): Polypropylene type
• The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.

1. Tuner
( ): AM mode
Marking except for ( ): FM mode
2. CD
( ): Play mode
Marking except for ( ): Stop state
3. Deck section
( ): Record mode
Marking except for ( ): Playback mode
Display / Control section:
( ): Active state
Marking except for ( ): CD Function mode at stop state
• Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
• Parts marked with “ ⚠ ” (⌈ ═ ═ ⌋) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
SW102	RECODE/PLAYBACK	OFF—ON
SW201	FUNCTION/POWER	TAPE—AM—FM AUTO—CD/OFF—ON
SW202	SURROUND	OFF—ON
SW203	X-BASS	OFF—ON
SW601	TAPE MAIN	OFF—ON

REF. NO	DESCRIPTION	POSITION
SW702	PICKUP IN	OFF—ON
SW761	CD LID OPEN/CLOSE	OFF—ON
SW771	PLAY/REPEAT	OFF—ON
SW772	STOP	OFF—ON
SW773	TRACK UP/CUE	OFF—ON
SW774	TRACK DOWN/REVIEW	OFF—ON



2SC1815 GR

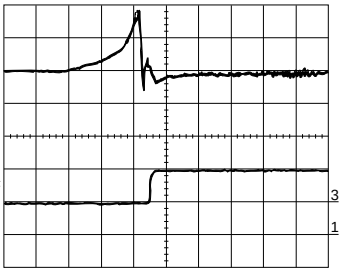
Figure 16 TYPES OF TRANSISTOR

WAVEFORMS OF CD CIRCUIT

1 5ms 0.50 V IC801 (20) F.E

2 5ms 5.0 V IC801 (54) DRF

STOP → PLAY
FOCUS — SERCH

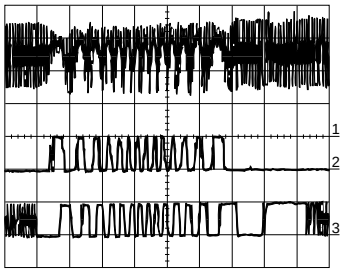


3 0.5ms 1.00 V HF

4 0.5ms 5.0 V HFL

5 0.5ms 5.0 V TES

CUE

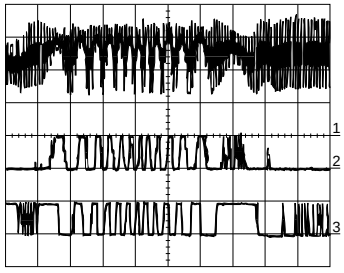


3 0.5ms 1.00 V H.F

4 0.5ms 5.0 V HFL

5 0.5ms 5.0 V TES

REVIEW



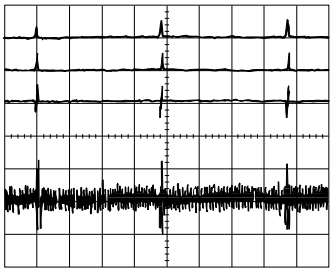
6 50ms 10.0 V JP+

7 50ms 10.0 V JP-

8 50ms 0.50 V JP

9 50ms 1.00 V TE

CUE

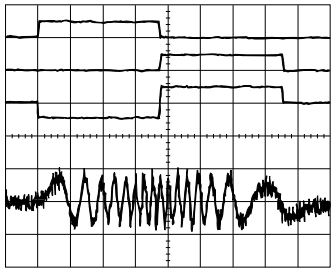


6 0.5ms 10.0 V JP+

7 0.5ms 10.0 V JP-

8 0.5ms 0.50 V JP

9 0.5ms 1.00 V TE



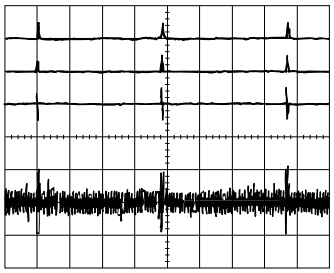
6 50ms 10.0 V JP+

7 50ms 10.0 V JP-

8 50ms 0.50 V JP

9 50ms 1.00 V TE

REVIEW

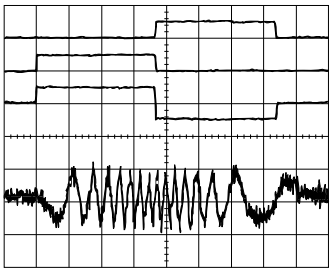


6 0.5ms 10.0 V JP+

7 0.5ms 10.0 V JP-

8 0.5ms 0.50 V JP

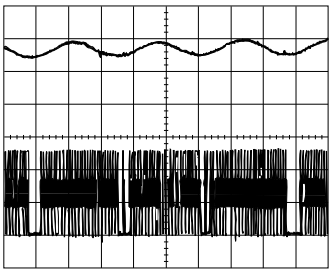
9 0.5ms 1.00 V TE



10 20ms 1.00 V SPO

11 20ms 2.00 V CLV+

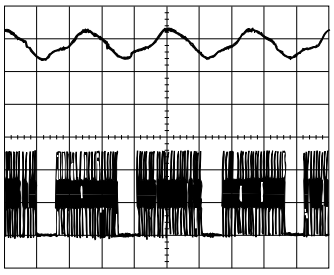
PLAY
NORMAL DISC
TN0=01



10 50ms 1.00 V SPO

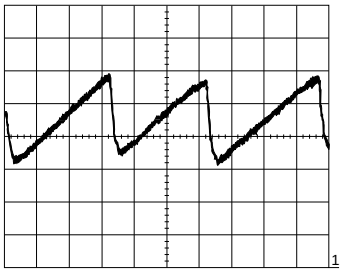
11 50ms 2.00 V CLV+

PLAY
TCD-712 (140mm)
TN0=01

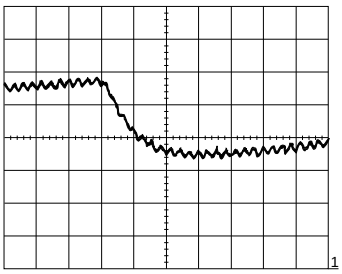


12 5s 100mV SLD

PLAY
TCD-712



12 0.5s 100mV SLD



TROUBLESHOOTING

When the CD does not function

When the CD section does not operate When the objective lens of the optical pickup is dirty,this section may not operate.Clean the objective lens,and check the playback operation.When this section does not operate even after the above step is taken,check the following items.
Remove the cabinet and follow the troubleshooting instructions.
"Track skipping and/or no TOC(Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.
Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.
Do not touch the lens with the bare hand.

• The CD function will not work.

The CD operating keys don't work.

Yes

Check the CD, DPS microcomputer (IC701), power supply, 4.19 MHz and 16.93 MHz clock, and reset terminal.

Yes

Check the waveform of SCK, SO (DATA) and SI (COMM).

Yes

See if the pick-up is in the pick-up in SW702 position.

Yes

If the items mentioned above are OK, check the main microcomputer IC701.

• The CD operating keys work.

Check the Focus - HF system.

Playback can be performed without a disc.

Yes

Does the pick-up move up and down twice?

Yes → Focus search OK.

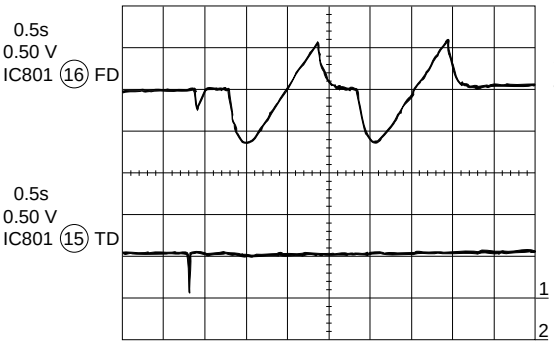
No

Does the output waveform of IC801(16)(FD) match that shown in Fig. 18?

Yes → Check the area around IC804-BI801/CNS801.

No

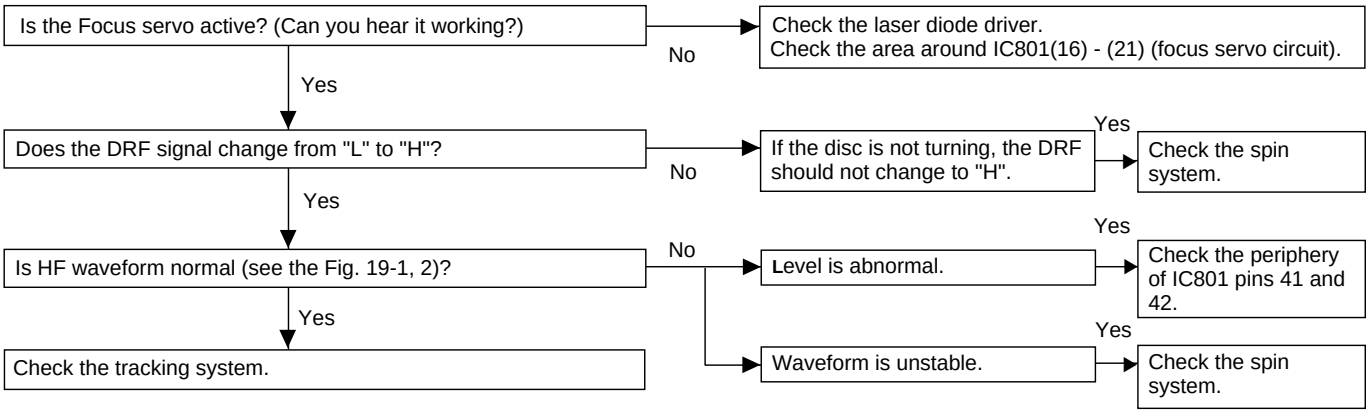
Check the IC801(50)(CLK) line, 4MHz.
Check the microcomputer data on pins (51)(CL), (52)(DAT) and (53)CE.



Focus search is performed two times when play operation is done without disc.

Figure 18

• Playback can only be performed when a disc is loaded.


Is the Focus servo active? (Can you hear it working?)
No
Check the laser diode driver.
Check the area around IC801(16) - (21) (focus servo circuit).
Yes
Does the DRF signal change from "L" to "H"?
No
If the disc is not turning, the DRF should not change to "H".
Yes
Check the spin system.
Yes
Is HF waveform normal (see the Fig. 19-1, 2)?
No
Level is abnormal.
Yes
Check the periphery of IC801 pins 41 and 42.
Yes
Check the tracking system.
Waveform is unstable.
Yes
Check the spin system.

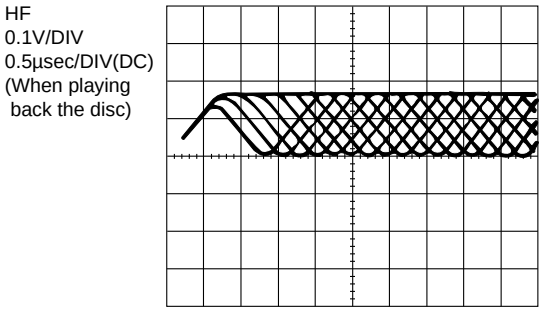
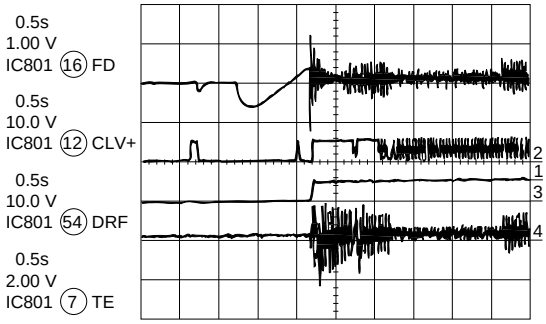


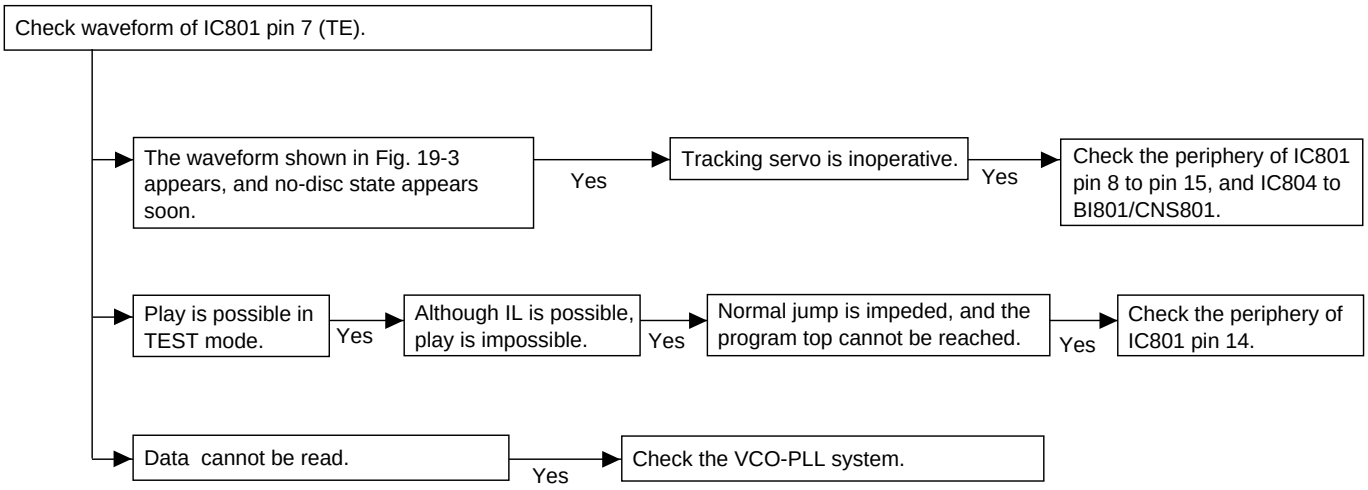
Figure 19-1



Waveform in case of normal play-back

Figure 19-2

• Check the tracking system.


Check waveform of IC801 pin 7 (TE).
The waveform shown in Fig. 19-3 appears, and no-disc state appears soon.
Yes
Tracking servo is inoperative.
Yes
Check the periphery of IC801 pin 8 to pin 15, and IC804 to BI801/CNS801.
Play is possible in TEST mode.
Yes
Although IL is possible, play is impossible.
Yes
Normal jump is impeded, and the program top cannot be reached.
Yes
Check the periphery of IC801 pin 14.
Data cannot be read.
Yes
Check the VCO-PLL system.

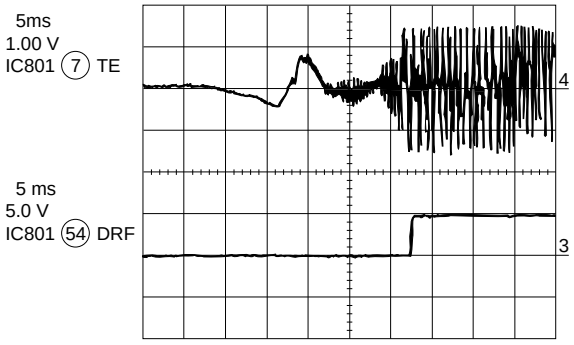


Figure 19-3

• Checking the spin system.

Play operation is performed without disc.

Yes

The turntable rotates a little. → Yes → The spin driver circuit is normal.

No

The turntable fails to rotate or rotates at high speed. → Yes → Check the periphery of IC801 pins 23 to 27, pin 39 and pin 40, IC802 pin 12 and pin 13, IC804 to BI803/CNS803.

• Checking the VCO-PLL system

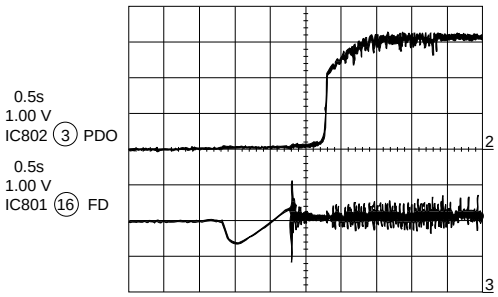
Play operation is performed when disc exits.

Yes

Although HF waveform is normal, TOC data cannot be read. → Yes → Check PDO waveform (Fig. 20).

Error

Check the IC801 pins 43 and 44, IC802 pins 3, 5, 7, 9 and 10.



Stop --> Play
As VCO frequency is locked at 4.32 M Hz, voltage of PDO rises and stabilizes.

Figure 20

• Although HF waveform is normal and the time indication is normal, no sound is emitted.

Check IC802 pin 48 (EFLG). → No → Usually, the number of pulses of flawless disc is 100 pulses/sec or less.

Yes

Check IC802 pins 37and 40.

Abnomal

Check the periphery of IC803 (OPAMP).

FUNCTION TABLE OF IC

IC701 RH-iX0105AWZZ (IX0105AW): System Control Microcomputer

Pin No.	Terminal Name	Port Name	Input/ Output	Function
1*	P03	MTCONT2	Input/Output	Used to input or output 4 bits at a time. When the output latch is set to "1", the unit will be in the input mode. The key-on wakeup function, which can be switched on or off by the software, and a pull-up transistor, which can be turned on or off by the software, are built in.
2*-5*	P10-P13	POWER-IN, DATA (VOL), STB (VOL)	Input/Output	Used to input or output 4 bits at a time. When the output latch is set to "1", the unit will be in the input CK (VOL), mode.The key-on wakeup function, which can be switched on or off by the software, and a pull-up transistor,which can be turned on or off by the software, are built in.
6*	D0	POWER-ON	Input/Output	Each terminal can be used to input or output 1 bit at a time. The output section has a latch which holds 1 bit. One of the D ports is assigned by register Y as a data point, to execute input or output. To use the port for input, set the output latch for that bit to "1". All of the output latches on port D can be set to "1" using the CLD command.
7	D1	MUTE	Input/Output	Each terminal can be used to input or output 1 bit at a time. The output section has a latch which holds 1 bit. One of the D ports is assigned by register Y as a data point, to execute input or output. To use the port for input, set the output latch for that bit to "1". All of the output latches on port D can be set to "1" using the CLD command.
8*-12	D2-D6	SYNC-OUT, RES,CQCK, COIN,REC	Input/Output	Each terminal can be used to input or output 1 bit at a time. The output section has a latch which holds 1 bit. One of the D ports is assigned by register Y as a data point, to execute input or output. To use the port for input, set the output latch for that bit to "1". All of the output latches on port D can be set to "1" using the CLD command.
13,14	D7,D8	SL+,SL-	Input/Output	Each terminal can be used to input or output 1 bit at a time. The output section has a latch which holds 1 bit. One of the D ports is assigned by register Y as a data point, to execute input or output. To use the port for input, set the output latch for that bit to "1". All of the output latches on port D can be set to "1" using the CLD command.
15*,16*	D9,D10	SRS2,SRS1	Input/Output	Each terminal can be used to input or output 1 bit at a time. The output section has a latch which holds 1 bit. One of the D ports is assigned by register Y as a data point, to execute input or output. To use the port for input, set the output latch for that bit to "1". All of the output latches on port D can be set to "1" using the CLD command.
17	P20	DRF	Input/Output	Used to receive 4 bits at a time.
18	P21	SQOUT	Input/Output	Used to receive 4 bits at a time.
19	P22	WRQ	Input/Output	Used to receive 4 bits at a time.
20	P23	PU-IN	Input/Output	Used to receive 4 bits at a time.
21	$\overline{\text{RESET}}$		Input/Output	Reset pulse input/output terminal. When a reset is caused by the watch dog timer, an "L" level will be output. The output is an N channel open drain.
22	XIN		Input	Input/output terminals for the main clock generation circuit. Used by connecting a ceramic resonator between the XIN and XOUT terminals. There is a built-in feedback resistor between the XIN and XOUT terminals.
23	XOUT		Output	Input/output terminals for the main clock generation circuit. Used by connecting a ceramic resonator between the XIN and XOUT terminals. There is a built-in feedback resistor between the XIN and XOUT terminals.
24	VSS		—	GND input terminal.
25	VDD		—	Positive power supply terminal.
26*	XCOUT		Output	Input/output terminals for the sub clock generation circuit. Used by connecting a crystal oscillator between the XCIN and XCOUT terminals. There is a built-in feedback resistor between the XCIN and XCOUT terminals.
27	XCIN		Input	Input/output terminals for the sub clock generation circuit. Used by connecting a crystal oscillator between the XCIN and XCOUT terminals. There is a built-in feedback resistor between the XCIN and XCOUT terminals.
28	AVSS		Input	GND input terminal for the A-D converter.
29	VREF		Input	Reference voltage input terminal for the A-D converter.
30	P30	REMOCONINT2	Input	Used to receive 4 bits at a time.
31	P31	TORAY1	Input	Used to receive 4 bits at a time.
32	P32	TORAY2	Input	Used to receive 4 bits at a time.
33	P33		Input	Used to receive 4 bits at a time.
34	P40		Input	Used to receive 4 bits at a time.
35-37	AIN5-AIN7		Input	Used to receive 4 bits at a time.
38-40	VLC3-VLC1		Input	LCD power input terminals. To use the internal resistor, connect VLC3 to VDD (if a brightness control is needed, connect VLC3 to VDD through a resistor). When an external power supply is used, applyvoltages as follows: 0<VLC1<VLC3<VLCD<VDD.
41-44	COM3-COM0		Output	LCD common output terminals.
45-61* (45*-56*)	SEG16-SEG0		Output	LCD segment output terminals.
62*-64*	P00-P02		Input/Output	Used to input or output 4 bits at a time. When the output latch is set to "1", the unit will be in the input mode. The key-on wakeup function, which can be switched on or off by the software, and a pull-up transistor, which can be turned on or off by the software, are built in.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

— M E M O —

SHARP PARTS GUIDE

MODEL QT-CD121

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC ..... Ceramic type
VCK ..... Ceramic type
VCT ..... Semiconductor type
VC • • MF ..... Cylindrical type (without lead wire)
VC • • MN ..... Cylindrical type (without lead wire)
VC • • TV ..... Square type (without lead wire)
VC • • TQ ..... Square type (without lead wire)
VC • • CY ..... Square type (without lead wire)
VC • • CZ ..... Square type (without lead wire)
VC • • • • • • • • • J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS ..... Carbon-film type
VRN ..... Metal-film type
VR • • MF ..... Cylindrical type (without lead wire)
VR • • MN ..... Cylindrical type (without lead wire)
VR • • TV ..... Square type (without lead wire)
VR • • TQ ..... Square type (without lead wire)
VR • • CY ..... Square type (without lead wire)
VR • • CZ ..... Square type (without lead wire)
VR • • • • • • • • • J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

NOTE:
Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

QT-CD121

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
INTEGRATED CIRCUITS				
IC1	VHILA1186N/-1	J	AE	FM Front End,LA1186N
IC2	VHILA1805//-1	J	AM	FM/AF IF MPX.,LA1805
IC101	VHIBA3311L/-1	J	AK	REC./P.B.Equalizer Amp., BA3311L
IC201	VHIKIA4558S-1	J	AK	Surround Amp.,KIA4558S
IC202	VHILA4597//-1	J	AH	Power Amp.,LA4597
IC203	VHIKIA7808P-1	J	AH	Voltage Regulator,KIA7808P
IC701	RH-IX0105AWZZ	J	BA	System Microcomputer, IX0105AW
IC801	VHILA9241M/-1	J	AS	Servo Amp.,LA9241M
IC802	VHILC78623D-1	J	AY	Servo/Signal Control,LC78623D
IC804	VHIBA5914FP-1	J	AN	Focus/Tracking/Spin/Slide Driver,BA5914FP
TRANSISTORS				
Q351	VSS8050D///-1	J	AC	Silicon,NPN,S8050 D
Q740	VS2SC1815GR-1	J	AB	Silicon,NPN,2SC1815 GR
Q804	VSS8050D///-1	J	AC	Silicon,NPN,S8050 D
Q805	VSS9012H///-1	J	AC	Silicon,PNP,S9012 H
DIODES				
D1	VHD1N4148//-1	J	AA	Silicon,1N4148
D101~103	VHD1N4148//-1	J	AA	Silicon,1N4148
D201	VHD1N4148//-1	J	AA	Silicon,1N4148
D308,309	VHD1N4148//-1	J	AA	Silicon,1N4148
⚠ D651~654	VHD1N4004//-1	J	AB	Silicon,1N4004
D740,741	VHD1N4148//-1	J	AA	Silicon,1N4148
D802	VHD1N4148//-1	J	AA	Silicon,1N4148
ZD801	VHEMTZJ5R6B-1	J	AD	Zener,5.6V,MTZJ5.6B
FILTERS				
CF1	RFILF0001SJZZ	J	AD	FM IF
CF2	RFILA0001SJZZ	J	AD	AM IF
F1	RFILR0001SJZZ	J	AD	FM Band Pass Filter
TRANSFORMERS				
T1	RCILI0001SJZZ	J	AD	FM IF
T2	RCILI0002SJZZ	J	AD	FM Detection
T3	RCILI0003SJZZ	J	AD	AM IF
⚠ T601	RTRNP0001SJZZ	J	AP	Power
COILS				
L1	RCILR0001SJZZ	J	AB	FM RF
L2	RCILB0001SJZZ	J	AE	OSC,FM
L3	RCILA0001SJZZ	J	AD	AM Bar Antenna
L4	RCILB0002SJZZ	J	AC	OSC,AM
L301	RCILB0003SJZZ	J	AD	OSC,Bias
L801	VP-DHR82K0000	J	AE	0.82 µH,Choke
L802	VP-DHR68K0000	J	AC	0.68 µH
VARIABLE RESISTORS				
VR1	RVR-M0001SJZZ	J	AC	6.8 kohms (B),Semi-VR [VCO]
VR201	RVR-B0001SJZZ	J	AE	20 kohms (B),Semi-VR [Volume]
VARIABLE CAPACITORS				
VC1~4	RVC-R0001SJZZ	J	AK	Variable Capacitor with Trimmer (TC1~4)
VIBRATORS				
X701	RCRM-0001SJZZ	J	AD	Ceramic,4 MHz
XL801	RCRM-0002SJZZ	J	AE	Ceramic,16.93 MHz
CAPACITORS				
C2	VCKYPA1HB102K	J	AA	0.001 µF,50V
C4	VCCCPA1HH220J	J	AA	22 pF (CH),50V
C5	VCCCPA1HH330J	J	AA	33 pF (CH),50V
C6	VCCRPA1HH150J	J	AA	15 pF (RH),50V
C8	VCCCPA1HH4R0C	J	AA	4 pF (CH),50V
C9	VCKYPA1HB472K	J	AB	0.0047 µF,50V
C10	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C11	VCKYPA1HB221K	J	AA	220 pF,50V

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C14,15	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C16	VCKYPA1HB472K	J	AB	0.0047 µF,50V
C17	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C20,21	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C22	VCKYPA1HB392K	J	AA	0.0039 µF,50V
C23	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C24	VCKYPA1HB471K	J	AA	470 pF,50V
C25	RC-GZA335AF1H	J	AB	3.3 µF,50V,Electrolytic
C26	RC-GZA226AF1C	J	AB	22 µF,16V,Electrolytic
C27	RC-GZA335AF1H	J	AB	3.3 µF,50V,Electrolytic
C28	VCQSMV1HS152J	J	AB	0.0015 µF,50V,Styrol
C29	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C31,32	VCTYPA1CU223M	J	AB	0.022 µF,16V
C33~35	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C36	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C37	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C38,39	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C105,106	VCKYPA1HB182K	J	AB	0.0018µF,50V
C107,108	VCKYPA1HB821K	J	AA	820 pF,50V
C109,110	VCKYPA1HB271K	J	AA	270 pF,50V
C111,112	VCKYPA1HB331K	J	AA	330 pF,50V
C113,114	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C115,116	VCQYKA1HM183K	J	AB	0.018 µF,50V,Mylar
C117,118	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C119	RC-GZA225AF1H	J	AB	2.2 µF,50V,Electrolytic
C120	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C121,122	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C123	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C201,202	VCQYKA1HM562K	J	AA	0.0056 µF,50V,Mylar
C203,204	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C205,206	VCKYPA1HB182K	J	AB	0.0018 µF,50V
C207~210	RC-GZA475AF1H	J	AB	4.7 µF,50V,Electrolytic
C211	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C212	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C213~216	VCQYKA1HM393K	J	AB	0.039 µF,50V,Mylar
C217,218	VCKYPA1HB272K	J	AA	0.0027 µF,50V
C219,220	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
C221,222	VCKYPA1HB152K	J	AA	0.0015 µF,50V
C223,224	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C225	RC-GZA227AF1E	J	AB	220 µF,25V,Electrolytic
C226	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C227	RC-GZW338AF1E	J	AG	3300 µF,25V,Electrolytic
C229,230	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C231,232	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C233,234	RC-GZV108AF1A	J	AD	1000 µF,10V,Electrolytic
C301,302	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C351	VCQYKA1HM222K	J	AA	0.0022 µF,50V,Mylar
C352	RC-GZA227AF1A	J	AB	220 µF,10V,Electrolytic
C353	VCQYKA1HM223K	J	AB	0.022 µF,50V,Mylar
C354	VCQYKA1HM562K	J	AA	0.0056 µF,50V,Mylar
C651~654	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C701,702	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C704	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C705	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C740	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C741	RC-GZA335AF1H	J	AB	3.3 µF,50V,Electrolytic
C779	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C801	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C802	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C803	RC-GZA104AF1H	J	AB	0.1 µF,50V,Electrolytic
C804	VCKYPA1HB102K	J	AA	0.001 µF,50V
C805,806	VCTYPA1CU333M	J	AB	0.033 µF,16V
C807	RC-GZA104AF1H	J	AB	0.1 µF,50V,Electrolytic
C808	VCTYPA1CU683M	J	AB	0.068 µF,16V
C809	VCTYPA1CU473M	J	AB	0.047 µF,16V
C810	VCKYPA1HB181K	J	AA	180 pF,50V
C811	VCTYPA1CU104M	J	AB	0.1 µF,16V
C812	VCKYPA1HB331K	J	AA	330 pF,50V
C813	VCTYPA1CU104M	J	AB	0.1 µF,16V
C814	VCTYPA1CU103M	J	AE	0.01 µF,16V
C815	VCKYPA1HB472K	J	AB	0.0047 µF,50V
C816	VCKYPA1HB102K	J	AA	0.001 µF,50V
C817	RC-GZA474AF1H	J	AA	0.47 µF,50V,Electrolytic
C818	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C819	RC-GZA476AF1C	J	AB	47 µF,16V,Electrolytic
C820	VCKYPA1HB332K	J	AA	0.0033 µF,50V
C821	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C822	VCKYPA1HB221K	J	AA	220 pF,50V
C830	VCCCPA1HH2R0C	J	AA	2 pF (CH),50V
C831	VCKYPA1HB272K	J	AA	0.0027 µF,50V
C832	VCCCPA1HH270J	J	AA	27 pF (CH),50V
C833	VCKYPA1HB102K	J	AA	0.001 µF,50V

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
C834	VCTYPA1CU333M	J	AB	0.033 µF,16V
C835	RC-GZA104AF1H	J	AB	0.1 µF,50V,Electrolytic
C837	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C838	VCTYPA1CU103M	J	AE	0.01 µF,16V
C839	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C840	RC-GZA334AF1H	J	AA	0.33 µF,50V,Electrolytic
C841,842	VCTYPA1CU473M	J	AB	0.047 µF,16V
C843	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic
C844	RC-GZA337AF1A	J	AB	330 µF,10V,Electrolytic
C845	RC-GZA475AF1H	J	AB	4.7 µF,50V,Electrolytic
C846	RC-GZA337AF1A	J	AB	330 µF,10V,Electrolytic
C847	VCTYPA1CU103M	J	AE	0.01 µF,16V
C848	RC-GZA105AF1H	J	AB	1 µF,50V,Electrolytic
C849	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C850	VCTYPA1CU104M	J	AB	0.1 µF,16V
C851	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C867,868	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C869,870	VCKYPA1HB222K	J	AA	0.0022 µF,50V
C873	VCKYPA1HF103Z	J	AB	0.01 µF,16V
C887	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C889	RC-GZA106AF1C	J	AB	10 µF,16V,Electrolytic
C890	RC-GZA107AF1A	J	AB	100 µF,10V,Electrolytic

RESISTORS

R1	VRD-ST2EE100J	J	AA	10 ohm,1/4W
R2	VRD-ST2CD330J	J	AA	33 ohms,1/6W
R3	VRD-ST2EE470J	J	AA	47 ohms,1/4W
R5	VRD-ST2CD334J	J	AA	330 kohms,1/6W
R6	VRD-ST2CD824J	J	AA	820 kohms,1/6W
R7	VRD-ST2EE391J	J	AA	390 ohms,1/4W
R8	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
R9	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R11	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R13,14	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
R15,16	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R17	VRD-ST2EE680J	J	AA	68 ohms,1/4W
R25	VRD-ST2CD121J	J	AA	120 ohms,1/6W
R27	VRD-ST2CD333J	J	AA	33 kohms,1/6W
R29	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R38	VRD-ST2EE182J	J	AA	1.8 kohms,1/4W
R101,102	VRD-ST2CD331J	J	AA	330 ohms,1/6W
R103,104	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R105,106	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R107,108	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R109,110	VRD-ST2CD121J	J	AA	120 ohms,1/6W
R113,114	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
R115~118	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
R119,120	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R121,122	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R123,124	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R125	VRD-ST2CD684J	J	AA	680 kohms,1/6W
R201,202	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R203,204	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R205,206	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R207,208	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R209,210	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R211,212	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R213,214	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R215,216	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R217,218	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R219,220	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R221,222	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R227,228	VRD-ST2EE121J	J	AA	120 ohms,1/4W
R230	VRD-ST2EE2R7J	J	AA	2.7 ohms,1/4W
R231	VRD-ST2EE331J	J	AA	330 ohms,1/4W
R233,234	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R351	VRD-ST2EE331J	J	AA	330 ohms,1/4W
R352	VRD-ST2EE151J	J	AA	150 ohms,1/4W
R353	VRD-ST2EE473J	J	AA	47 kohms,1/4W
R354	VRD-ST2EE100J	J	AA	10 ohm,1/4W
R455,456	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R457,458	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R708,709	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R710	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R711	VRD-ST2CD272J	J	AA	2.7 kohms,1/6W
R712	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R713	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R714	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R715	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R716	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R718~723	VRD-ST2CD153J	J	AA	15 kohms,1/6W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
R724	VRD-ST2EE153J	J	AA	15 kohms,1/4W
R725	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R726	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R727	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R728,729	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R730	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R731~734	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R736	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R740	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R741	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R742	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R743	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R744,745	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R771	VRD-ST2EE392J	J	AA	3.9 kohms,1/4W
R772	VRD-ST2EE272J	J	AA	2.7 kohms,1/4W
R773	VRD-ST2EE182J	J	AA	1.8 kohms,1/4W
R774	VRD-ST2EE152J	J	AA	1.5 kohms,1/4W
R776	VRD-ST2EE103J	J	AA	10 kohm,1/4W
R779	VRD-ST2EE470J	J	AA	47 ohms,1/4W
R801	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R802	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R803	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R804	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R805	VRD-ST2CD682J	J	AA	6.8 kohms,1/6W
R806	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R807	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R808	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R809	VRD-ST2CD273J	J	AA	27 kohms,1/6W
R810	VRD-ST2CD823J	J	AA	82 kohms,1/6W
R811	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R812	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R813	VRD-ST2CD333J	J	AA	33 kohms,1/6W
R814	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R815	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R816	VRD-ST2CD152J	J	AA	1.5 kohms,1/6W
R817	VRD-ST2CD823J	J	AA	82 kohms,1/6W
R819	VRD-ST2CD393J	J	AA	39 kohms,1/6W
R820	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R821	VRD-ST2CD563J	J	AA	56 kohms,1/6W
R822	VRD-ST2CD682J	J	AA	6.8 kohms,1/6W
R823	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R824	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R825	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R826,827	VRD-ST2CD224J	J	AA	220 kohms,1/6W
R828,829	VRD-ST2EE102J	J	AA	1 kohm,1/4W
R830,831	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R832	VRD-ST2CD563J	J	AA	56 kohms,1/6W
R833	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R834	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R835	VRD-ST2CD471J	J	AA	470 ohms,1/6W
R836,837	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R838	VRD-ST2CD333J	J	AA	33 kohms,1/6W
R839,840	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R842	VRD-ST2EE220J	J	AA	22 ohms,1/4W
R849	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R856	VRD-ST2CD122J	J	AA	1.2 kohms,1/6W
R857	VRD-ST2CD273J	J	AA	27 kohms,1/6W
R858	VRD-ST2CD681J	J	AA	680 ohms,1/6W
R860	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R871	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R873,874	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R875,876	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R877	VRD-ST2EE221J	J	AA	220 ohms,1/4W
R878	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R880	VRD-ST2CD101J	J	AA	100 ohm,1/6W

OTHER CIRCUITRY PARTS

BI801/CNS801	QCNWN0003SJZZ	J	AF	Connector Ass'y,8/8Pin
BI802/CNS802	QCNWN0004SJZZ	J	AD	Connector Ass'y,5/5Pin
BI803/CNS803	QCNWN0005SJZZ	J	AE	Connector Ass'y,6/6Pin
CNP101	QCNCW001DSJZZ	J	AC	Socket,4Pin
CNP201	QCNCW001CSJZZ	J	AC	Socket,3Pin
CNP602	QCNCW002BSJZZ	J	AC	Socket,2Pin
CNP803	QCNCM932FAFZZ	J	AC	Plug,6Pin
CNS101	QCNWN0010SJZZ	J		Connector Ass'y,4Pin
CNS201	QCNWN0001SJZZ	J	AD	Connector Ass'y,3Pin
CNS602	QCNWN0007SJZZ	J	AC	Connector Ass'y,2Pin
COR1	RCORF0001SJZZ	J	AC	Core
COR801	RCORF0001SJZZ	J	AC	Core
FW202	QCNWN0012SJZZ	J	AF	Flat Wire,5Pin
FW701	QCNWN0011SJZZ	J	AE	Flat Wire,4Pin

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
J201	QJAKM0007AWZZ	J	AF	Jack,Headphones
LCD701	RV-LX0001SJZZ	J	AH	LCD
M601	9GD192112343W	J	AX	Motor with Pulley [Tape]
M701	RMOTV0408AFM3	J	AN	Motor with Chassis [Spindle]
M702	RMOTV0409AFM1	J	AN	Motor with Gear [Sled]
RX771	VHLSPS4461/-1	J	AQ	Remote Sensor,SPS4461
⚠ SO651	QSOCA0001SJZZ	J	AE	AC Socket
SP501,502	VSP0010PBT98S	J	AL	Speaker,Woofer
SP503,504	RALMB0001SJZZ	J	AH	Tweeter
SW102	QSW-S0001SJZZ	J	AD	Switch,Slide Type [Record/Playback]
SW201	QSW-S0002SJZZ	J	AD	Switch,Slide Type [Function/Power]
SW202	QSW-P0001SJZZ	J	AD	Switch,Push Type [SURROUND]
SW203	QSW-P0001SJZZ	J	AD	Switch,Push Type [X-BASS]
SW601	9GD6401011499	J	AE	Switch,Leaf Type [Tape Main]
SW702	QSW-F9001AWZZ	J	AE	Switch,Push Type [Pickup In]
SW761	QSW-F0001SJZZ	J	AD	Switch,Leaf/Skeleton Type [CD Lid Open/Close]
SW771	QSW-K0001SJZZ	J	AC	Switch,Key Type [Play]
SW772	QSW-K0001SJZZ	J	AC	Switch,Key Type [Stop]
SW773	QSW-K0001SJZZ	J	AC	Switch,Key Type [Track Up/Cue]
SW774	QSW-K0001SJZZ	J	AC	Switch,Key Type [Track Down/Review]

CD MECHANISM PARTS

301	NGERH0586AFZZ	J	AC	Gear,Middle
302	NGERH0587AFZZ	J	AC	Gear,Drive
303	MLEVP1054AFZZ	J	AC	Rail,Guide
304	NSFTM0291AFFW	J	AD	Shaft,Guide
305	PCUSG0613AFZZ	J	AC	Cushion
⚠ 306	RCTRH8179AFZZ	J	BG	Pickup Unit Ass'y
701	XBSSD26P06000	J	AA	Screw,ø2.6×6mm
702	XHBSD20P05000	J	AA	Screw,ø2×5mm
703	XBBSD20P03000	J	AA	Screw,ø2×3mm
704	LX-WZ1070AFZZ	J	AA	Washer,ø4.5×ø1.5×0.25mm
M701	RMOTV0408AFM3	J	AN	Motor with Chassis [Spindle]
M702	RMOTV0409AFM1	J	AN	Motor with Gear [Sled]
SW702	QSW-F9001AWZZ	J	AE	Switch,Push Type [Pickup In]

CABINET PARTS

201	GCABA1002SJM1	J	BC	Front Cabinet Ass'y
202	GCABC1001SJSA	J	AL	Top Cabinet
203	GCABB1002SJSA	J	AU	Rear Cabinet
204	CGERH0001SJ01	J	AF	Gear,Damper
205	LHLDZ1001SJZZ	J	AD	Bracket,Dial
206	HPNLC1002SJSA	J	AF	Panel,Control
207	HPNLD1001SJSA	J	AD	Panel,Dial
208	HDECQ0001SJSA	J	AD	Cover,Volume
209	JKNBK0007SJSA	J	AF	Knob,Volume
210	LHLDW1001SJZZ	J	AD	Nylon Band
211	MSPRC0002SJFD	J	AC	Spring,Battery,+/-
212	JHNDP1001SJSA	J	AE	Handle
213	QANTR0001SJZZ	J	AG	Rod Antenna
214	MSPRZ0001SJFD	J	AC	Spring,Rod Antenna
215	GFTAB1001SJSA	J	AD	Battery Compartment Lid
216	JKNBZ0002SJSA	J	AD	Knob,Tuning
217	JKNBK0005SJSA	J	AF	Knob,X-BASS
218	JKNBZ0004SJSA	J	AF	Knob,CD
219	JKNBK0003SJSA	J	AC	Knob,Function
220	MSPRD0002SJFD	J	AC	Spring,CD Lid
221	GFTAC1001SJSA	J	AE	Cassette Lid
222	MSPRD0001SJFD	J	AC	Spring,Cassette Lid
223	JBTN-0001SJSA	J	AC	Button,Pause
224	JBTN-0002SJSA	J	AC	Button,Stop
225	JBTN-0003SJSA	J	AC	Button,FF
226	JBTN-0004SJSA	J	AC	Button,REW
227	JBTN-0005SJSA	J	AC	Button,Play
228	JBTN-0006SJSA	J	AC	Button,Rec
229	LANGK0001SJFW	J	AC	Bracket,Button
230	PGUMS0001SJZZ	J	AB	Leg,Cushion
231	GFTAT1001SJSA	J	AE	CD Lid
232	CHLDM1001SJ01	J	AG	Stabilizer Ass'y
232- 1	————		—	Stabilizer (Not Replacement Item)
232- 2	PMAGF0002AWZZ	J	AE	Magnet
233	MSPRP0001SJFW	J	AC	Lever,Record
234	NDRM-0001SJZZ	J	AD	Drum
235	LHLDZ1002SJZZ	J	AC	Holder,LCD
236	MSPRC0001SJFN	J	AC	Spring,Battery,-

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
237	PCUSS0001SJZZ	J	AB	Cushion
238	PRDAR0001SJZZ	J	AD	Heat Sink
239	LHLDA1001SJZZ	J	AC	Holder
241	CMECB0001SJ01	J	AY	Tape Mechanism Ass'y
241- 1	9GD192104309	J	AR	Pinch Roller Arm Ass'y
241- 2	9GD192107039	J	AE	Belt,RF
241- 3	9GD192109389	J	AE	Belt,Main
241- 4	9GD62070114	J	AL	Head,Playback/Record
241- 5	9GD62091010	J	AM	Head,Erase
241- 6(M601)	9GD192112343W	J	AX	Motor with Pulley [Tape]
241- 7(SW601)	9GD6401011499	J	AE	Switch,Leaf Type [Tape Main]
242	TSPC-0001SJZZ	J	AL	Specification Label
243	JKNBK0006SJSA	J	AE	Knob,Surround
601	XUBSD30P12000	J	AA	Screw,ø3×12mm
602	XUBSD30P20000	J	AA	Screw,ø3×20mm
603	XUBSD30P10000	J	AA	Screw,ø3×10mm
604	XUBSD25P10000	J	AB	Screw,ø2.5×10mm
605	XWHSD28-08120	J	AB	Screw,ø2.8×ø12×0.8mm
606	XUPSD25P08000	J	AB	Screw,ø2.5×8mm
607	XUBSD30P08000	J	AA	Screw,ø3×8mm
608	XBBSD25P06000	J	AB	Screw,ø2.5×6mm

ACCESSORIES

⚠	QACCD0006AW00	J	AP	AC Power Supply Cord
	RRMCG0052AWSA	J	BB	Remote Control
	TINSE0003SJZZ	J	AE	Operation Manual
	TLABR0965SJZZ	J	AD	Label,Bar Code
	TLABZ0003SJZZ	J	AE	Feature Label

P.W.B. ASSEMBLY (Not Replacement Item)

PWB-A1~5	DCEK-0001SJ03	J	—	Main/Switch/Terminal/Headphones/Spacer (Combined Ass'y)
PWB-B	QPWBF3895AFZZ	J	AC	CD Motor (PWB Only)

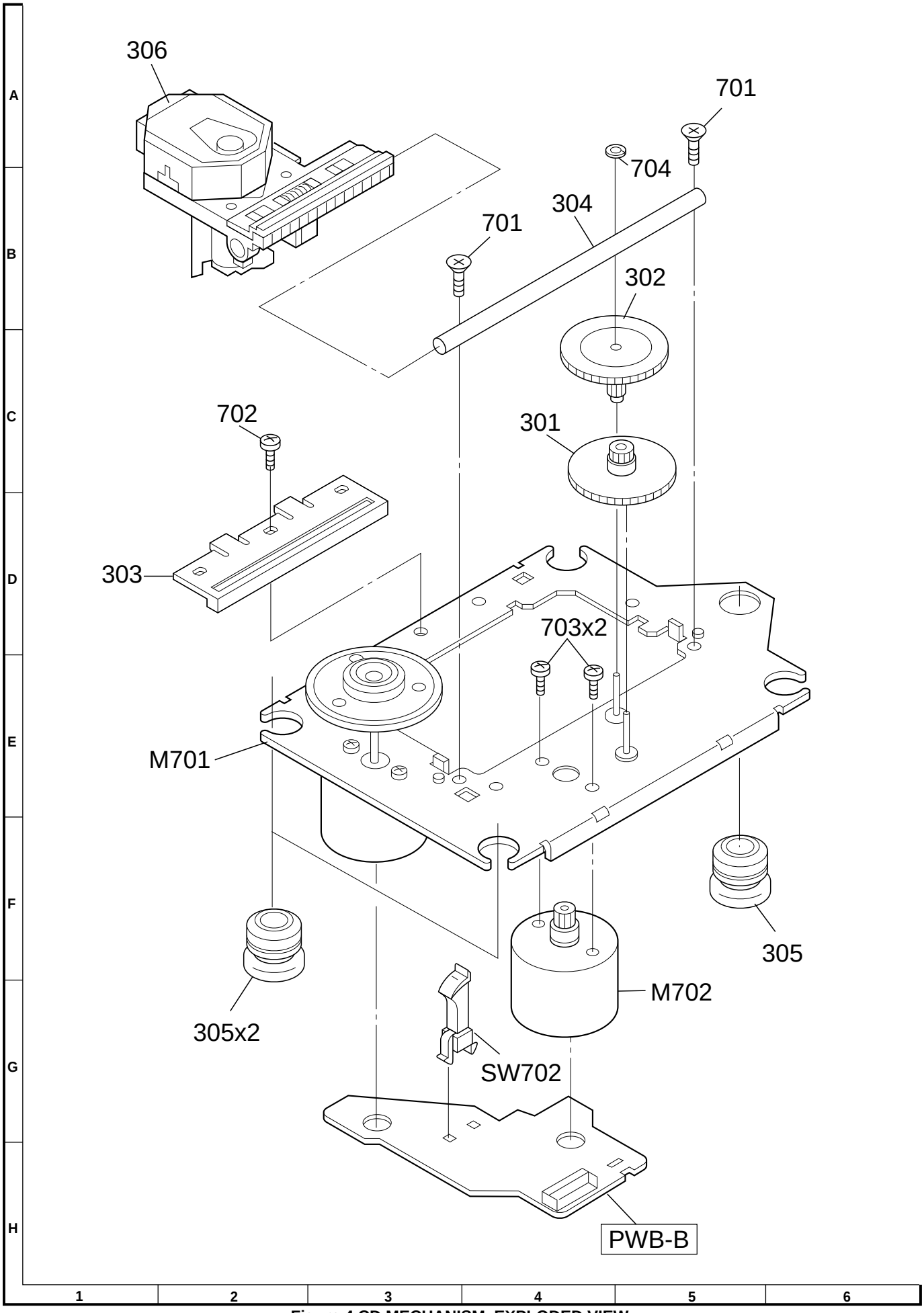
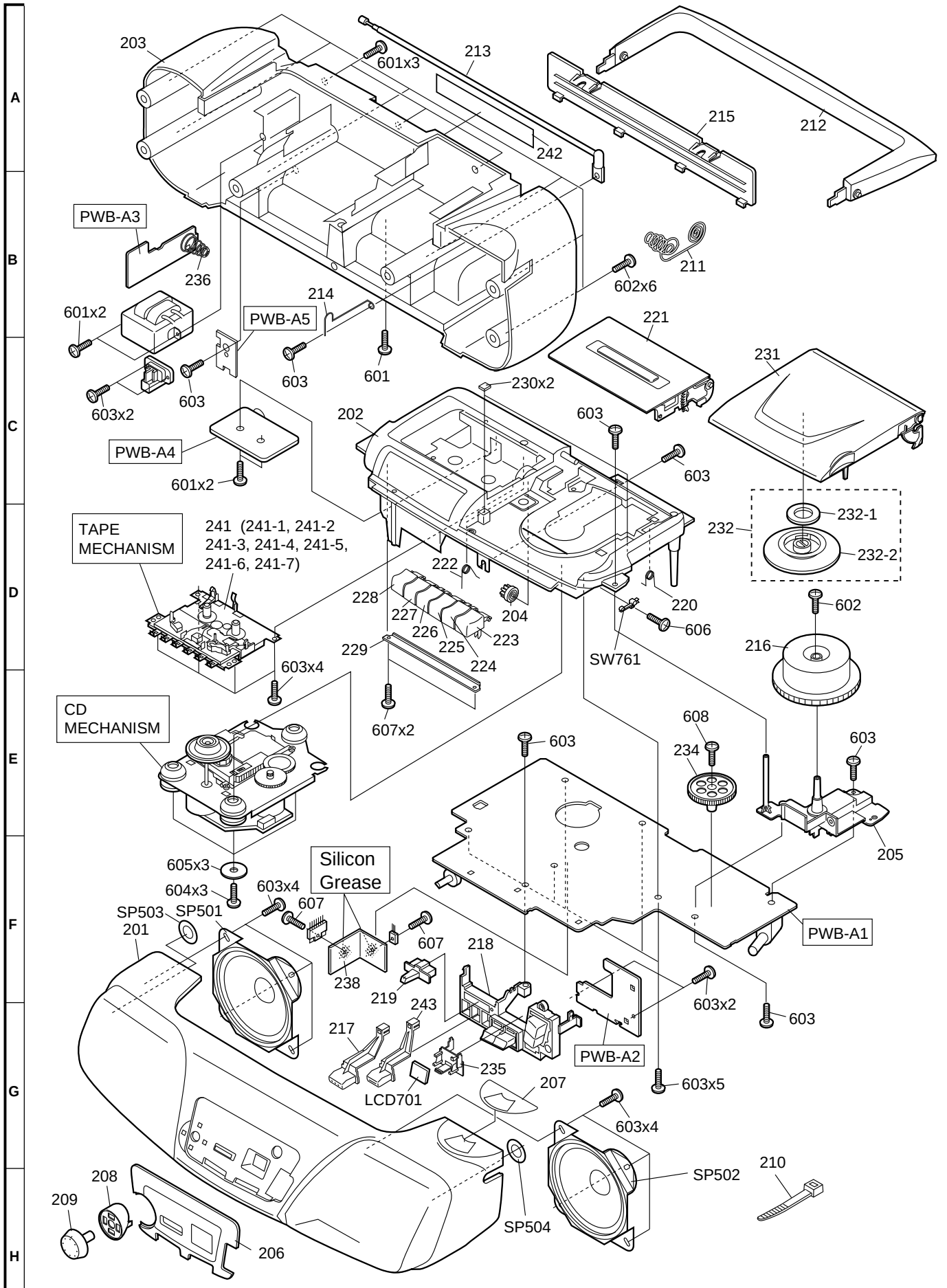


Figure 4 CD MECHANISM EXPLODED VIEW



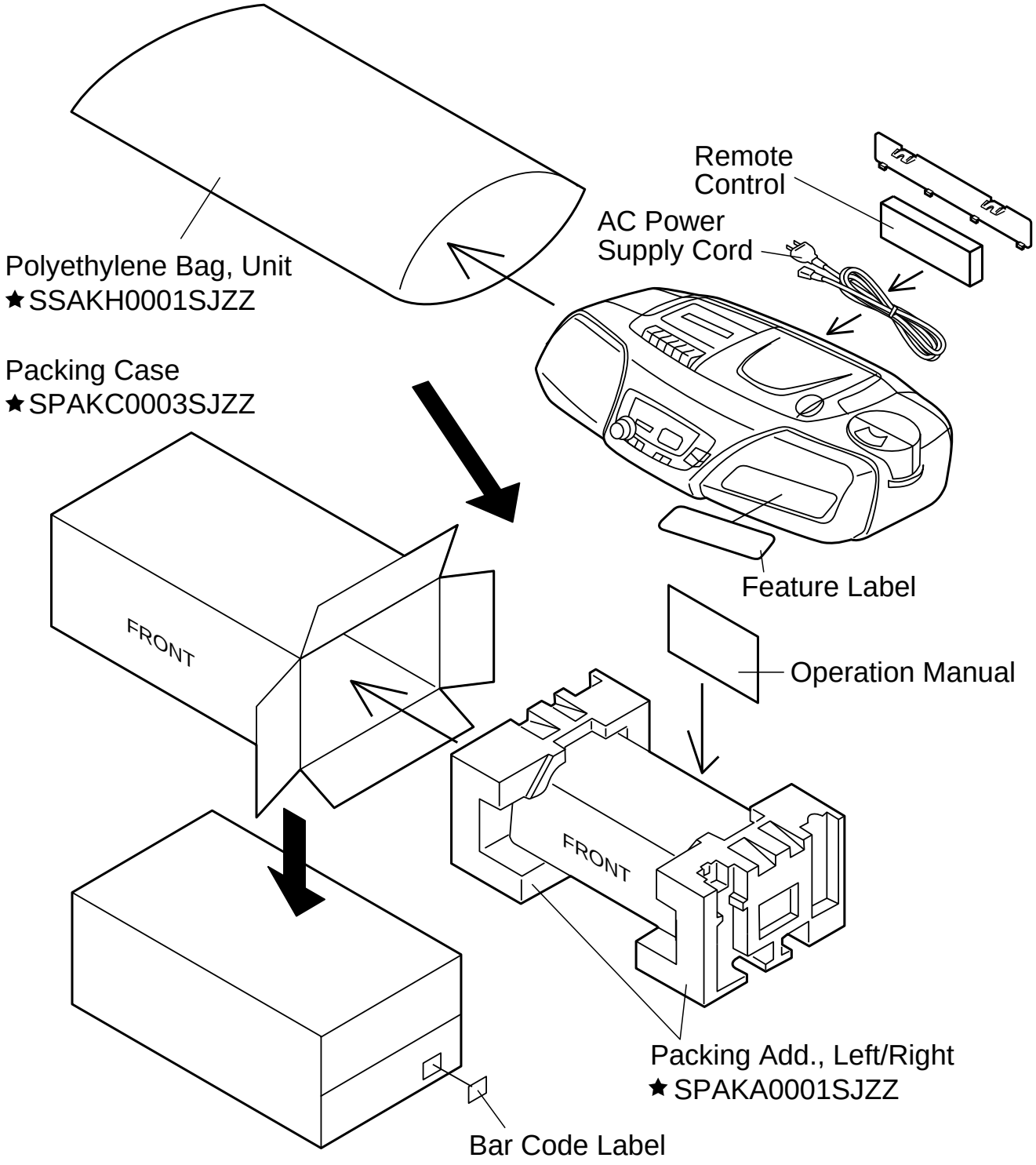
NOTE: The parts of cassette mechanism which are supplied are only the unit and consumable parts.

Figure 5 CABINET EXPLODED VIEW

PACKING OF THE SET

• Setting position of switches and knobs

Tape Mechanism Control	STOP STATE
TUNING	LOW
POWER/FUNCTION	OFF/TAPE
X-BASS	OFF
SURROUND	OFF
VOLUME	LOW



★ : Not Replacement Item

— M E M O —

— M E M O —

SHARP

COPYRIGHT © 1998 BY SHARP COPORATION

ALL RIGHTS RESERVED.

No part of this publication may be reproduced,
stored in a retrieval system, or transmitted in
any from or by any means, electronic, mechanical,
photocopying, recording, or otherwise, without
prior written permission of the publisher.

SHARP CORPORATION
Communication Systems Group
Quality & Reliability Control Center
Higashihiroshima, Hiroshima 739-0192, Japan
Printed in Japan

A9805-2002NS•HA•M

SC • LAG